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Agenda item 4: Draft Ecosystem Approach based Measures Gap Analysis

Draft Ecosystem Approach based Measures Gap Analysis

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UNEP/MAP
Athens, 2015

Note of the Secretariat

Decision IG. 21.3 of the 18th Meeting of the Contracting Parties requested the Secretariat, to “undertake a gap analysis of existing Barcelona Convention/Protocols measures relating to the implementation of the Ecosystem Approach and based on this analysis, enable the EcAp CG to further reflect on key measures for the implementation of EcAp”.

Following this mandate, the Secretariat has prepared an Initial Measures Gap Analysis, which was discussed during the 4th EcAp Coordination Group Meeting.

The 4th EcAp Coordination Group Meeting further requested the Secretariat, to analyse more in depth the implementation status of the various measures, in light of the 2012-2013 country reports received and form recommendations on how to address the identified gaps.

In light of the above, the Secretariat has prepared the current draft Ecosystem Approach Based Measures Gap Analysis (the draft Gap Analysis), which aims to identify priority gaps and proposes specific recommendations on how to address them.

In light of the analysis of the Secretariat, the Mediterranean coastal and marine environment is facing interlinked pressures with cumulative impacts, as mirrored by the EcAp Ecological Objectives and EcAp Targets, with the key drivers of population growth, urban sprawl, mass tourism, intensified industrial activities, including offshore, shipping, and (over)fishing.

The draft Gap Analysis however showcases that there are already existing regional and national measures necessary to achieve the above pressures and achieve the agreed EcAp Targets. As such, the core structure of an EcAp Programme of Measures (EcAp PoM) already exists, addressing all EcAp Targets. The main challenge for the upcoming years, however, is to further strengthen this frame of the PoM, by focusing on addressing identified gaps and especially strengthening country level implementation.

The Contracting Parties are encouraged, based on the above, to give further recommendations both on the analysis and on its findings, recommendations and on the necessary follow-up on the analysis, in order to ensure that an EcAp PoM will be fully implemented during the next phase of EcAp (2016-2021), with the overall aim to achieve the good environmental status of the Mediterranean coast and sea.

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I. INTRODUCTION

The aim of draft Ecosystem Approach Based Measures Gap Analysis (the draft Gap Analysis) is to follow-up on Decision IG 21/3¹ that the Contracting Parties agreed on at their 18th Meeting (**COP18**) to conclude a gap analysis on existing measures under the Barcelona Convention² that are relevant to achieving or maintaining good environmental status (**GES**) of the Mediterranean Sea, in line with the ecosystem approach.

This document, in line with the above, carries out an initial assessment on how far existing measures, which are not necessarily designed with the Ecosystem Approach (**EcAp**) in mind, are sufficient to reach the identified targets of EcAp, distinguishing between measures that are adopted and implemented and the ones that are adopted but not (fully) implemented yet.

The scope of this draft Gap Analysis thus is to analyse measures under the Barcelona Convention/UNEP/MAP³ requirements and obligations that follow the identified common indicators⁴ relevant targets (**EcAp Targets**) and the pressures these targets relate to.

The current draft Gap Analysis builds on the ongoing work under the Barcelona Convention's Protocols, more specifically on and under the various UNEP/MAP Regional Plans, as well as on the Initial Assessment of the Mediterranean Sea and Coast (Second State of the Mediterranean Marine and Coastal Environment Report, so-called **SoER-MED**⁵), on the Economic and Social Analysis of the uses of the Coastal and Marine Waters in the Mediterranean draft regional report⁶, and on specific assessments that were already carried out in the implementation of these measures.

The current draft Gap Analysis does not analyse ongoing monitoring related work, as the EcAp Integrated Monitoring and Assessment Programme is currently being developed in a parallel process.

Based on the above, the main objectives of this document, while recognizing diverse conditions, capacities and needs of different Contracting Parties, are to a) analyse existing measures and assess their specific links to the EcAp Targets and b) identify possible gaps based on this analysis (including implementation gaps).⁷

Definition of Measure under the EcAp measures gap analysis:

Article 4, Paragraph 4, point (a) of the Barcelona Convention states that “In implementing the Convention and the related Protocols, the Contracting Parties shall: adopt programmes and measures which contain, where appropriate, time limits for their completion.”

In light of the above, in the framework of the Barcelona Convention, for the purposes of this draft Gap Analysis and for moving towards a Regional EcAp Programme of Measures, EcAp measures cover management measures *undertaken on a common regional basis and, where appropriate, with specific time limits for completion, with the overall aim of achieving the good environmental status of the Mediterranean coast and sea.*

This draft Gap Analysis thus is focusing on the existing measures taken in the past (in many cases without having agreed on using EcAp as a guiding principle yet). The Gap Analysis is based on both

¹ UNEP(DEPI)/MED IG.21/9 Decision IG.21/3 on the Ecosystems Approach including adopting definitions of Good Environmental Status (GES) and targets

² Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention)

³ United Nations Environment Programme/ Mediterranean Action Plan for the Barcelona Convention

⁴ UNEP(DEPI)/MED WG.390/4 Report of the Integrated Correspondence Groups of GES and Targets Meeting

⁵ State of the Mediterranean Marine and Coastal Environment: http://195.97.36.231/publications/ SoMMCER_Eng.pdf

⁶ http://planbleu.org/sites/default/files/upload/files/analyse_eco_sociale_eaux_med_ESA_2014en.pdf

⁷ While here are many measures relevant to EcAp in general, aim was to focus on those that relate to the established targets of the EcAp common indicators and which have a common regional basis.

regional and national measures reported by Contracting Parties as contributing to the implementation of the Barcelona Convention and its Protocols. The following analysis will identify, in light of the above, the main measures under the Barcelona Convention and in the auspices of UNEP/MAP, laying down their legislative basis, their specific links to the EcAp Targets, including an analysis of their implementation status and gaps identified.

The draft Gap Analysis, based on the above, categorizes the existing measures in the following groups:

- (a) Existing measures adopted and implemented, for which time limits for their completion have been reached;
- (b) Existing measures adopted but not yet implemented, for which time limits for their completion have not been yet reached;
- (c) Existing measures covering issues linked to EcAp Environmental Objective, but not going far enough for target achievement.

II. KEY ENVIRONMENTAL PRESSURES AND RISKS AFFECTING THE MEDITERRANEAN COAST AND SEA

The Second State of the Mediterranean Marine and Coastal Environment Report⁸ (**SoER-MED**) underlines the existence of multiple human activities causing various environmental pressures effecting the coast and sea in their region, with sometimes conflicting interests. Based on the SoER-MED, *key drivers* of the **main pressures** affecting the marine and coastal environment are population growth, mass tourism, intensified industrial activities, including offshore, shipping, and (over)fishing, together resulting in interlinking pressures and cumulative impacts.

Population growth and mass tourism drive pressures such as **unsustainable coastal development and sprawl**, local disruption of circulate patterns caused by human-made structures (**change in hydrographical conditions**), human mediated impact of nutrients (waste water) leading to **eutrophication**, and urban pollution leading to **chemical contamination**. These drivers (population growth and mass tourism) are also implicitly linked to chemical contamination from agriculture and industry and to overfishing.

Increased land-based industrial activities drive **chemical contamination**, with hazardous substances being a major problem, and they are also one of the main sources of **marine litter** in the Mediterranean. While *agricultural activities* lead to **eutrophication**, *maritime and offshore activities* drive pressures such as **acute events contamination** (oil spills), **introduction of non-indigenous species**, **marine litter**, and **disturbance of sea-floor integrity**.

Fishing activities drive pressures such as **over-fishing** (based in the stocks assessments undertaken by the GFCM and according to the European Environmental Agency, 88% of the assessed Mediterranean fish stocks are overexploited⁹), **disturbance of sea-floor integrity** (by bottom dredging gears), **eutrophication**, **chemical contamination**, and the **spread of non-indigenous species** (specifically linked to aquaculture) while affecting **marine food webs** (already have reduced on average of 1 trophic level in fisheries catches, increased jellyfish and reduced abundance of large predator species).

Shipping is linked to pressures such as **contamination from acute events (oil spills)**, **marine litter**, introduction of **invasive species**, and **marine noise**.

The cumulative impacts of the above pressures next to the impact of climate change are all negatively affecting biodiversity and are linked to biodiversity loss and degradation of habitats.

⁸ State of the Mediterranean Marine and Coastal Environment:
http://195.97.36.231/publications/SoMMCER_Eng.pdf

⁹ EEA Marine Messages, available at : <http://www.eea.europa.eu/publications/marine-messages>

Specific links can be also found in between the different drivers and pressures, impacting each other. Tourism for example, is a driver of various pressures, while at the same time is affected by all the negative cumulative impacts of the pressures listed above. The loss caused by the multiple pressures negatively affecting the ecosystem of the Mediterranean Sea and coast can also be linked to degradation of ecosystem services and economic losses.

Based on the draft Economic and Social Analysis of the Uses of the Coastal and Marine Waters in the Mediterranean (**the Socio-Economic Report**)¹⁰, contributing to the SoER-MED, fisheries, aquaculture, tourism, marine transport, and the Offshore industry are the five key sectors in the Mediterranean basin, generating **360 billion EUR** in terms of production value and **4,2 million direct jobs, approximately three times more of considering indirect** employment¹¹. These sectors are all drivers of environmental pressures on the one hand, while at the same time are vulnerable to the pressures created, in an interlinked manner.

Based on the Socio-Economic Report, the most important sector in the Mediterranean is *tourism*, resulting in the most job-creation region-wide, with **3,3 million direct** jobs and **8,5 million total jobs** in and over **250 billion EUR** generated in coastal Mediterranean areas.

The fisheries sector is described in the Socio-Economic Report mainly as made-up of small-scale artisan boats (80%), with **250,000 jobs** created due to constant growing demand for seafood in a deficit between imports and exports (**3,5 billion EUR deficit in 2009**). Regarding *aquaculture*, the Socio-Economic Report highlights the constant growth of the sector. In 2011, it was already exceeding the fishing captures sector and representing 3% of total world figures, with highest numbers of production in Egypt, Greece and Turkey, resulting in total **2,5 billion EUR** and **123,000 jobs** directly (with **combined fishing and aquaculture** sectors, together with indirect jobs amounting **770,000 employment**).

Maritime transport is reported to be a constantly growing sector too, using the Mediterranean as a major load and discharge chanter for crude oil, and increasing carrying capacity of vessels, with Mediterranean ports accounting 10% of world container throughout, generating **70 billion EUR** and creating more than **550,000 jobs**.

The Socio-Economic Report finds *offshore exploitation* (of oil and gas) to be a growing activity as well, with future potential focus areas of explorations in the Aegean-Levantine sea for oil and in the Ionian Sea and Central Mediterranean for gas production (oil and gas production are under study or currently in process on the coasts of 10 Contracting Parties, Croatia, Cyprus, Egypt, Israel, Lebanon, The State of Libya, Malta, Spain, Tunisia and Turkey). In 2011, offshore oil and gas produced in the Mediterranean Sea amounted approximately to **32 billion EUR**, creating **29,000 direct jobs**, a number which rose to **400, 000 jobs**, when considering also indirect and induced employment.

While it is relatively easy to determine the socio-economic impact of sectoral activities, as there are data available, due to lack of data availability and in some cases methodology to value, it is rather hard to determine the ecosystem services provided by the sea and the coast in the region, in spite of being extremely important regarding ecosystem services (according to the 2012 UNEP TEEB discussion paper, globally, ocean and coastal biomes may provide us with as much as two-thirds of the ecosystem services that make up the planet's natural capital¹²). Conserving and enhancing the ecosystem services, in reality, is a matter of managing human interactions with the marine and coastal environment in line with EcAp without ruling out economic uses of the ocean and the coast, recognizing the key pressures

¹⁰ The draft Socio-Economic Report is available at :

http://planbleu.org/sites/default/files/upload/files/analyse_eco_sociale_eaux_med_ESA_2014en.pdf

¹¹ The Socio-Economic Report did not access agriculture and specific industry impacts, but focused on the key sectors that take place on the shore or in the sea.

¹² The Economics of Ecosystems and Biodiversity Discussion Paper: Why value the Oceans?, UNEP TEEB publication is available at : <http://www.teebweb.org/wp-content/uploads/2013/04/2013-TEEB-for-Oceans-Discussion-Paper.pdf>

and identifying opportunities to reduce them, while still promoting environmental and economic benefits.

III. THE UNEP/MAP/BARCELONA CONVENTION SYSTEM

The main regulatory instrument to address the key environmental pressures and risks affecting the Mediterranean coastal and marine environment is the **Barcelona Convention**¹³.

Under the Barcelona Convention (Article 4(1)(2), the Contracting Parties are generally obliged to take, individually or jointly, all appropriate measures in accordance with the Convention and the Protocols in force to which they are party “to prevent, abate, combat and to the fullest extent possible eliminate pollution of the Mediterranean Sea Area” and “to protect and enhance the marine environment in that area so as to contribute towards its sustainable development.” They also “pledge themselves to take appropriate measures to implement the Mediterranean Action Plan and to “pursue the protection of the marine environment and the natural resources of the Mediterranean Sea Area as an integral part of the development process, meeting the needs of present and future generations in an equitable manner.”

In protecting the marine and coastal environment and contributing to the sustainable development of the Mediterranean, the Contracting Parties, according to Article 4(3), are obliged (i) to apply the precautionary principle and the polluter-pays principle, (iii) to undertake environmental impact assessment of activities likely to cause significant adverse impact on the marine environment, (iv) to promote cooperation amongst states in environmental impact assessment procedures related to activities with transboundary effects, and (v) to commit themselves to promote integrated management of the coastal zone.

Today all 21 countries surrounding the Mediterranean Sea as well as the European Union are Contracting Parties to the Barcelona Convention. It now has a total of seven “related” Protocols:

1. The Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (**Dumping Protocol**), signed in 1976, in force 1978, amended 1995 not yet in force;
2. The Protocol concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and other Harmful Substances in Cases of Emergency (**Emergency Protocol**), signed 1976, in force 1978, replaced by the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (**Prevention and Emergency Protocol**), signed in 2002, in force 2004;
3. The Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources and Activities (**LBS Protocol**), signed in 1980, in force 1983; amended 1996, in force 2008)
4. The Protocol Concerning Mediterranean Specially Protected Areas (SPA/BD Protocol), signed in 1982, in force 1986 replaced by The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (**SPA & Biodiversity Protocol**), signed in 1995, in force 1999;
5. Protocol for the Protection of the Mediterranean Sea Against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (**Offshore Protocol**), signed in 1994, in force 2011;
6. Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (**Hazardous Wastes Protocol**), signed in 1996, in force 2008;
7. Protocol on Integrated Coastal Zone Management in the Mediterranean (**ICZM Protocol**), signed in 2008, in force 2011.

¹³ Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols which entered into force in 2004 replacing the 1976 “Convention for the Protection of the Mediterranean Sea Against Pollution”.

In order to ensure further progress in the implementation of the major obligations under the Barcelona Convention and its Protocols, the UNEP/MAP system has produced regional policy instruments such as the Strategic Action Programme to Address Pollution from Land-Based Activities (**SAP/MED in the framework of the LBS Protocol**), the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (**SAP/BIO**), Regional Plans composed of Programmes of Measures covering the areas of pollution from land based sources and litter (regional plans with concrete timeframes to phase out substances that are toxic, persistent, and liable to accumulate in line with Art 15 of the LBS Protocol), Regional Plans addressing conservation needs of several species and habitats as well as NIS challenges, Action Plan for the implementation of the ICZM Protocol, and the Mediterranean Strategy on Sustainable Development (**MSSD**). The most recent Regional Plan was created at COP18, during which the Contracting Parties agreed on a Regional Plan on Marine Litter Management, which came into force in July 2014¹⁴.

Article 26 of the Barcelona Convention stipulates that the Contracting Parties must transmit to the Secretariat reports on a) the legal, administrative, and other measures taken by them for the implementation of the Convention, the Protocols, and the recommendations adopted by their meetings, b) the effectiveness of the measures referred to sub-paragraph a, and c) problems encountered in the implementation of the instruments as mentioned above.

The Reporting Info System is the infrastructure that provides tools to support the report activity, and is operated by the Regional Activity Centre for Information and Communication (**INFO/RAC**). Reporting data consists of the textual and numerical data regarding the extent of implementation of the Barcelona Convention and its Protocols, as well as of the recommendations adopted by the MOPs, and the Contracting Parties are requested to provide this data to the Secretariat on a biannual basis (with most recent reporting period of 2012-2013).

Work is currently ongoing, with the aim of implementing by the next Meeting of the Contracting Parties (**COP19**) an Offshore Action Plan and an Action Plan for Sustainable Consumption and Production (**SCP Action Plan**), in addition to the review of the MSSD.

In addition, the LBS NAPs are currently being reviewed, to ensure that they fully reflect the new relevant Regional Action Plans and EcAp targets with regards to pollution and litter ecological objectives.

The Ecosystem Approach process and its contribution to address key environmental pressures and risks affecting the Mediterranean coastal and marine environment

The Ecosystem Approach (**EcAp**) is the overarching principle of UNEP/MAP with the ultimate aim of identifying and achieving the GES of the Mediterranean Sea.

The 15th Meeting of the Contracting Parties (**COP15**) to the Barcelona Convention (Almeria, Spain, 2008) decided to progressively apply the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment for the promotion of sustainable development.

The 17th Meeting of the Contracting Parties (**COP17**) confirmed the importance given to the EcAp in the Mediterranean, by recognizing it as a guiding principle for the overall work under the Barcelona Convention.

The EcAp process's key steps and state of play of deliverables are as follows:

- ◁ Agreement on vision and goals (at COP17);

14 For the list of all relevant Regional Plans, Strategies, Action Plans, please see further in details this gap analysis.

- ◁ Preparation of the Integrated Assessment of the Mediterranean Ecosystem with the contribution of and subject to peer-review by the Contracting Parties (Initial Assessment undertaken, with the outcome of the SoER-MED, endorsed at COP17. Third Quality Status Report is foreseen by 2017);
- ◁ Adoption of 11 ecological objectives and 28 corresponding operational objectives (COP17) and an integrated list of 61 indicators and GES descriptions (COP18), ensuring synergy with the EU Marine Strategy Framework Directive (EU MSFD);
- ◁ Implementation of an Integrated Monitoring and Assessment Programme based on agreed common indicators and targets (Integrated Monitoring and Assessment Programme to be agreed by COP19 in 2015, work ongoing);
- ◁ Cyclic/periodical assessments of the marine and coastal environment to monitor the implementation of EcAp, and to assess GES and the effectiveness of programmes of measures (to this aim the EcAp timeline foresees the preparation of periodical quality status reports, with the next one foreseen in 2017).
- ◁ Programme of Measures to achieve GES

The EcAp-MED project funded by the European Commission was instrumental in this process. EcAp-MED in 2012-2015 had a 1,7 million EUR budget, which was matched with 440,000 EUR in 2013 by the Contracting Parties, dedicating almost forth of the activities budget of the Mediterranean Trust Fund (MTF) for implementing the next steps of the EcAp process in 2014-2015.

MedPartnership and its contribution to address key environmental pressures and risks affecting the Mediterranean coastal and marine environment

The UNEP/MAP GEF Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (**MedPartnership**) is a collective effort of leading organizations (regional, international, non-governmental, etc.) and countries sharing the Mediterranean Sea towards the protection of the marine and coastal environment of the Mediterranean. The MedPartnership is being led by UNEP/MAP and the World Bank and is financially supported by the Global Environmental Facility (GEF) and other donors, including the EU and all participating countries.

The MedPartnership's overarching goal is to enable a coordinated and strategic approach to catalyze the policy, legal, and institutional reforms as well as the investments necessary to reverse the degradation trends affecting the Mediterranean, including its coastal habitats and biodiversity. As such, it contributes to addressing almost all pressures and risks described in the previous chapter and measures undertaken under it will be also analysed in the current draft Gap Analysis.

Moreover, the MedPartnership works through two lines of actions:

- ◁ Technical and policy support led by UNEP/MAP (Regional Project); and
- ◁ Project financing led by the World Bank (Investment Fund/Sustainable MED).

The project is being implemented in close association with other relevant regional initiatives, such as the Horizon 2020 Initiative to de-pollute the Mediterranean, the Integrated European Maritime Policy, and the World Bank/GEF Sustainable Mediterranean Program, as well as others. The project also contributes to the sustainable development objectives of the Union of the Mediterranean.

The project is being carried out in the following GEF eligible countries in the region (Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Lebanon, The State of Libya, Morocco, Montenegro, Syria, Tunisia and Turkey, with the participation of the Palestinian Authority).¹⁵

¹⁵ More information is available on the MedPartnership website at the following address:
<http://www.theMedPartnership.org/>.

Table 1

Signatures and Ratifications of the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols as of 12 June 2015.

Contracting Parties	1976 Barcelona Convention - 1/				1976 Dumping Protocol - 2/			1976 Emergency Protocol - 3/		
	Signature	Ratification	Acceptance of 1995 Amendments	Entered into force	Signature	Ratification	Acceptance of 1995 Amendments	Signature	Ratification	Entered into force
Albania		30.05.90/AC	26.07.01	09.07.04	-	30.05.90/AC	26.07.01	-	30.05.90/AC	29.06.90
Algeria		16.02.81/AC	09.06-04	09.07.04	-	16.03.81/AC	-	-	16.03.81/AC	15.04.81
Bosnia and Herzegovina		22.10.94(SUC)	-	-	-	22.10.94/SUC	-	-	22.10.94/SUC	01.03.92
Croatia		12.06.92(SUC)	03.05.99	09.07.04	-	12.06.92/SUC	03.05.99	-	12.06.92/SUC	08.10.91
Cyprus	16.02.76	19.11.79	18.07.03	09.07.04	16.02.76	19.11.79	18.07.03	16.02.76	19.11.79	19.12.79
European Union	13.09.76	16.03.78/AP	12.11.99	09.07.04	13.09.76	16.03.78/AP	12.11.99	13.09.76	12.08.81/AP	11.09.81
Egypt	16.02.76	24.08.78/AP	11.02.00	09.07.04	16.02.76	24.08.78/AP	11.02.00	16.02.76	24.08.78/AC	23.09.78
France	16.02.76	11.03.78/AP	29.03.01	09.07.04	16.02.76	11.03.78/AP	29.03.01	16.02.76	11.03.78/AP	10.04.78
Greece	16.02.76	03.01.79	10.03.03	09.07.04	11.02.77	03.01.79	-	16.02.76	03.01.79	02.02.79
Israel	16.02.76	03.03.78	29.09.05	29.10.05	16.02.76	01.03.84	-	16.02.76	03.03.78	02.04.78
Italy	16.02.76	03.02.79	07.09.99	09.07.04	16.02.76	03.02.79	07.09.99	16.02.76	03.02.79	05.03.79
Lebanon	-	08.11.77/AC	*	*	-	08.11.77/AC	-	-	08.11.77/AC	12.02.78
Libya	31.01.77	31.01.79	12.01.09	11.02.09	31.01.77	31.01.79	-	31.01.77	31.01.79	02.03.79
Malta	16.02.76	30.12.77	28.10.99	09.07.04	16.02.76	30.12.77	28.10.99	16.02.76	30.12.77	12.02.78
Monaco	16.02.76	20.09.77	11.04.97	09.07.04	16.02.76	20.09.77	11.04.97	16.02.76	20.09.77	12.02.78
Montenegro	-	19.11.07	19.11.07	19.12.07	-	-	-	-	-	-
Morocco	16.02.76	15.01.80	07.12.04	06.01.05	16.02.76	15.01.80	05.12.97	16.02.76	15.01.80	15.02.80
Slovenia	-	16.09.93/AC	08.01.03	09.07.04	-	16.09.93/AC	08.01.03	-	16.09.93/AC	15.03.94
Spain	16.02.76	17.12.76	17.02.99	09.07.04	16.02.76	17.12.76	17.02.99	16.02.76	17.12.76	12.02.78
Syria	-	26.12.78/AC	10.10.03	09.07.04	-	26.12.78/AC	11.04.08	-	26.12.78/AC	25.01.79
Tunisia	25.05.76	30.07.77	01.06.98	09.07.04	25.05.76	30.07.77	01.06.98	25.05.76	30.07.77	12.02.78
Turkey	16.02.76	06.04.81	18.09.02	09.07.04	16.02.76	06.04.81	18.09.02	16.02.76	06.04.81	06.05.81

Accession = AC

Approval = AP

Succession = SUC

* pending notification from Depository country

Contracting Parties	2002 Emergency Protocol - 4/			1980 Land-Based Sources Protocol - 5/				1982 Specially Protected Areas Protocol - 6/		
	Signature	Ratification	Entered into force	Signature	Ratification	Acceptance of 1996 Amendments	Entered into force	Signature	Ratification	Entered into force
Albania	-	-	-	-	30.05.90/AC	26.07.01	11.05.08	-	30.05.90/AC	29.06.90
Algeria	25.01.02	-	-	-	02.05.83/AC	-	-	-	16.05.85/AC	23.03.86
Bosnia and Herzegovina	-	-	-	-	22.10.94/SUC	-	-	-	22.10.94/SUC	01.03.92
Croatia	25.01.02	01.10.03	17.03.04	-	12.06.92/SUC	11.10.06	11.05.08	-	12.06.92/SUC	08.10.91
Cyprus	25.01.02	19.12.07	18.01.08	17.05.80	28.06.88	18.07.03	11.05.08	-	28.06.88/AC	28.07.88
European Union	25.01.02	26.05.04	25.06.04	17.05.80	07.10.83/AP	12.11.99	11.05.08	30.03.83	30.06.84/AP	23.03.86
Egypt	-	-	-	-	18.05.83/AC	-	-	16.02.83	08.07.83	23.03.86
France	25.01.02	02.07.03	17.03.04	17.05.80	13.07.82/AP	29.03.01(AP)	11.05.08	03.04.82	02.09.86/AP	02.10.86
Greece	25.01.02	27.11.06	27.12.06	17.05.80	26.01.87	10.03.03	11.05.08	03.04.82	26.01.87	25.02.87
Israel	22.01.03	10.09.14	10.10.14	17.05.80	21.02.91	19.06.09	19.07.09	03.04.82	28.10.87	27.11.87
Italy	25.01.02	-	-	17.05.80	04.07.85	07.09.99	11.05.08	03.04.82	04.07.85	23.03.86
Lebanon	-	-	-	17.05.80	27.12.94	-	-	-	27.12.94/AC	26.01.95
Libya	25.01.02	-	-	17.05.80	06.06.89/AP	-	-	-	06.06.89/AC	06.07.89
Malta	25.01.02	18.02.03	17.03.04	17.05.80	02.03.89	28.10.99	11.05.08	03.04.82	11.01.88	10.02.88
Monaco	25.01.02	03.04.02	17.03.04	17.05.80	12.01.83	26.11.96	11.05.08	03.04.82	29.05.89	28.06.89
Montenegro	-	19.11.07	19.12.07	-	19.11.07(AC)	19.11.07	11.05.08	-	-	-
Morocco	25.01.02	26.04.11	26.05.11	17.05.80	09.02.87	02.10.96	11.05.08	02.04.83	22.06.90	22.07.90
Slovenia	25.01.02	16.02.04	17.03.04	-	16.09.93/AC	08.01.03	11.05.08	-	16.09.93/AC	15.03.94
Spain	25.01.02	10.07.07	09.08.07	17.05.80	06.06.84	17.02.99	11.05.08	03.04.82	22.12.87	21.01.88
Syria	25.01.02	11.04.08	11.05.08	-	01.12.93/AC	11.04.08	11.05.08	-	11.09.92/AC	11.10.92
Tunisia	25.01.02	-	-	17.05.80	29.10.81	01.06.98	11.05.08	03.04.82	26.05.83	23.03.86
Turkey	-	03.06.03	17.03.04	-	21.02.83/AC	18.09.02	11.05.08	-	06.11.86/AC	06.12.86

Accession = AC

Approval = AP

Succession = SUC

Contracting Parties	1995 SPA & Biodiversity Protocol* - 7/				1994 Offshore Protocol - 8/		
	Signature	Ratification	Entered into force	Amendments to Annexes II & III Entered into force	Signature	Ratification	Entered into force
Albania	10.06.95	26.07.01	25.08.01	16.04.15	-	26.07.01	24.03.11
Algeria	10.06.95	14.03.07	13.04.07	16.04.15	-	-	-
Bosnia and Herzegovina	-	-	-		-	-	-
Croatia	10.06.95	12.04.02	12.05.02	16.04.15	14.10.94	-	-
Cyprus	10.06.95	18.07.03	17.08.03		14.10.94	16.05.06	24.03.11
European Union	10.06.95	12.11.99	12.12.99	16.04.15	17.12.12/AC.	29.03.13-	29.03.13
Egypt	10.06.95	11.02.00	12.03.00	16.04.15	-	-	-
France	10.06.95	16.04.01	16.05.01	16.04.15	-	-	-
Greece	10.06.95	-	-		14.10.94	-	-
Israel	10.06.95	-	-	16.04.15	14.10.94	-	-
Italy	10.06.95	07.09.99	12.12.99	16.04.15	14.10.94	-	-
Lebanon	-	22.04.09	22.05.09	16.04.15	-	-	-
Libya	-	-	-		-	16.06.05	24.03.11
Malta	10.06.95	28.10.99	12.12.99	16.04.15	14.10.94	-	-
Monaco	10.06.95	03.06.97	12.12.99	16.04.15	14.10.94	-	-
Montenegro	-	19.11.07	19.12.07	16.04.15	-	-	-
Morocco	10.06.95	24.04.09	25.05.09	16.04.15	-	01.07.99	24.03.11
Slovenia	-	08.01.03	07.02.03	16.04.15	10.10.95	-	-
Spain	10.06.95	23.12.98	12.12.99	16.04.15	14.10.94	-	-
Syria	-	10.10.03	09.11.03	16.04.15	20.09.95	22.02.11	24.03.11
Tunisia	10.06.95	01.06.98	12.12.99	16.04.15	14.10.94	01.06.98	24.03.11
Turkey	-	18.09.02	18.10.02	16.04.15	-	-	-

* Annex II (List of endangered or threatened species) and Annex III (List of species whose exploitation is regulated) of the SPA & Biodiversity Protocol were adopted in 1996 and amended by Decision IG.19/12 "Amendments of the list of Annexes II and III of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean" of the 16th Meeting of the Contracting Parties, Marrakesh, Morocco, 2009. The amendments entered into force on 13 February 2011.

Contracting Parties	1996 Hazardous Wastes Protocol 9/			2008 Integrated Coastal Zone Management (ICZM) Protocol 10/		
	Signature	Ratification	Entered into force	Signature	Ratification	Entered into force
Albania	-	26.07.01	18.01.08		04.05.2010/AD	24.03.11
Algeria	01.10.96	-	-	21.01.08	-	-
Bosnia and Herzegovina	-	-	-	-	-	-
Croatia	-	-	-	21.01.08	29.01.13/R	28.02.13
Cyprus	-	-	-	-	-	-
European Union	-	-	-	16.01.09-	29.09.10/AP	24.03.11
Egypt	01.10.96	-	-	-	-	-
France	-	-	-	21.01.08	29.10.09/AP	24.03.11
Greece	01.10.96	-	-	21.01.08	-	-
Israel	-	-	-	21.01.08	08.04.14/AP	-
Italy	01.10.96	-	-	21.01.08	-	-
Lebanon	-	-	-	-	-	-
Libya	01.10.96	-	-	-	-	-
Malta	01.10.96	28.10.99	18.01.08	21.01.08	-	-
Monaco	01.10.96	-	-	21.01.08	-	-
Montenegro	-	19.11.07	18.01.08	21.01.08	09.01.12/R-	08.02.12-
Morocco	20.03.97	01.07.99	18.01.08	21.01.08	21:09:12/R	21.10.12-
Slovenia	-	-	-	21.01.08	01.12.09/R	24.03.11
Spain	01.10.96	-	-	21.01.08	22.06.10/R	24.03.11
Syria	-	22.02.11	24.03.11	21.01.08	22.02.2011	24.03.11
Tunisia	01.10.96	01.06.98	18.01.08	21.01.08	-	-
Turkey	01.10.96	03.04.04	18.01.08	-	-	-

* Pending notification from Deposit0ry Country

Adhesion= AD

Approval = AP

Ratification = R

STATUS OF ENTRY INTO FORCE

Legal instruments	Place and date of Adoption	Entry into force date	Place and date of adoption of amendment	Entry into force of amendments
Convention for the Protection of the Mediterranean Sea against Pollution, amended as Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention)	16 February 1976, Barcelona	12 February 1978	—	—
	—	—	10 June 1995, Barcelona	9 July 2004
The Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft (Dumping Protocol), amended as The Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (Dumping Protocol)	16 February 1976, Barcelona	12 February 1978	—	—
	—	—	10 June 1995, Barcelona	Not yet in force
The Protocol concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and other Harmful Substances in Cases of Emergency (Emergency Protocol)	16 February 1976, Barcelona	12 February 1978	—	—
The Protocol concerning Co-operation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (Prevention and Emergency Protocol)*	25 January 2002, Malta	17 March 2004	—	—

* According to paragraph 2 of Article 25, this Protocol as from the date of its entry into force (17 March 2004) shall replace the Emergency Protocol (of 1976) in the relations between the Parties to both instruments.

Legal instruments	Place and date of Adoption	Entry into force date	Place and date of adoption of amendment, if any	Entry into force of amendments
The Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources , amended as The Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources and Activities (LBS Protocol)	17 May 1980, Athens	17 June 1983	—	—
	—	—	7 March 1996, Syracuse	11 May 2008
The Protocol Concerning Mediterranean Specially Protected Areas (SPA Protocol)	3 April 1982, Geneva	23 March 1986	Not applicable	Not applicable
The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA & Biodiversity Protocol)**	10 June 1995, Barcelona	12 December 1999	Not applicable	Not applicable
Protocol for the Protection of the Mediterranean Sea Against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol)	14 October 1994, Madrid	24 March 2011	Not applicable	Not applicable
Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (Hazardous Wastes Protocol)	1 October 1996, Izmir	18 January 2008	Not applicable	Not applicable
Protocol on Integrated Coastal Zone Management (ICZM Protocol)	21 January 2008, Madrid	24 March 2011	Not applicable	Not applicable

** According to paragraph 2 of Article 32, this Protocol as from the date of its entry into force (12 December 1999) shall replace the SPA Protocol (of 1982) in the relations between the Parties to both instruments.

IV. ANALYSIS OF MEASURES AND GAPS

1 Biodiversity and non-Indigenous Species

1.1 Biodiversity

Biodiversity protection has been in the forefront in the Mediterranean from an early stage of the work of UNEP/MAP, with one of the key Barcelona Convention objectives being the protection of the marine environment and its natural resources in order to contribute to the sustainable development of the area.

The Convention is enhanced by the Protocol concerning Specially Protected Areas and Biological Diversity” (**SPA/BD Protocol**), adopted in Barcelona in 1995¹⁶. This new Protocol, which came into force in 1999, aims at promoting the conservation and the sustainable management of areas having a particular natural or cultural value and at promoting the conservation of the animal and plant species endangered or threatened.

It envisages in particular dispositions relating to the creation, protection, and management of Specially Protected Areas (**SPAs**) and the establishment of a list of Specially Protected Areas of Mediterranean Importance (**SPAMIs**) next to the general goal of protection and conservation of the species. In addition, Annex I to the SPA/BD Protocol¹⁷ sets regionally a common criteria for the choice of protected marine and coastal areas that could be included in the SPAMI list, while Annex II to the SPA/BD Protocol¹⁸ contains a list of endangered and threatened species in the Mediterranean (last amendment in December 2013, at COP18) and Annex III¹⁹ lists species whose exploitation is regulated (last amendment in February 2012, during COP17).

The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (**SPA/BD**) is thus the principal regional legal instrument available to the Contracting Parties to the Barcelona Convention to implement on the Mediterranean the United Nations Convention on Biodiversity (**CBD**) and the *in situ* conservation and the sustainable use of the marine and coastal biodiversity.

The Regional Activity Centre for Specially Protected Areas (**RAC/SPA**) assists Contracting Parties to reach their engagements for this Protocol.

In addition, the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean (**SAP/BIO**) provides a programmatic framework for implementing the SPA/BD Protocol for all stakeholders (Contracting Parties, International Organizations, NGOs, private sector, etc.) undertaking activities for the protection and management of the marine and coastal environment in the Mediterranean.

The SAP/BIO also proposes a list of specific priority actions for Contracting Parties to undertake, such as inventorying, mapping, and monitoring the Mediterranean coastal and marine biodiversity, conserving sensitive sites, species, and habitats, assessing and mitigating the impact of threats to biodiversity, developing research to improve knowledge and fill in gaps regarding biodiversity, and developing skills to ensure technical assistance and coordination, to strengthen information sharing and participation of stakeholders, and to increase awareness (please see further under).

In the SAP/BIO context, 61 NAPs have been created (Please see list of SAP/BIO NAPs attached in Annex I).

¹⁶ It replaced the Protocol concerning Mediterranean Specially Protected Areas (SPA Protocol), signed in Geneva in 1982 and entered into force in 1986

¹⁷ http://rac-spa.org/sites/default/files/annex/annex_1_en.pdf

¹⁸ http://rac-spa.org/sites/default/files/annex/annex_2_en_2013.pdf

¹⁹ http://rac-spa.org/sites/default/files/annex/annex_3_en_2013.pdf

In addition, in 2008-2009 an action to update the SAPBIO on climate change issues was conducted and the Secretariat, based on a COP17 mandate, has carried out in 2013 an assessment, the so-called SAP/BIO implementation analysis (the **SAP/BIO Analysis**)²⁰, to analyse the SAP/BIO implementation status and possible update needs.

This SAP/BIO Analysis found that while the implementation of SAP/BIO has resulted in many positive outcomes for the Mediterranean biodiversity and the 61 NAPs show national ownership of the Contracting Parties, there is also a need to strengthen implementation and enforcement, as well as to update the SAP/BIO priority actions list, both in line with the Ecosystem Approach and the Aichi targets.

The Analysis also described in detail the key achievements in the field of SAP/BIO implementation and the following summary greatly builds on this SAP/BIO Analysis and follows the SAP/BIO list of priority actions, without touching on the first, i.e. on monitoring, on which work is ongoing (and which is not considered a measure in the sense of EcAp implementation).²¹

1.1.1 SAP/BIO

The following analysis works with the Strategic Action Programme for the conservation of Biological diversity in the Mediterranean Region (**SAP/BIO**), on the NAPs, on the 2013 SAP/BIO Analysis, and also on recent updates, achievements, in the framework of EcAp in the Mediterranean region.

It follows the structure of the SAP/BIO, but does not analyse its first objective (or so-called area) related to monitoring, as it does not fall under the scope of measure under EcAp. It sees the various areas/objectives as targets in nature and the priority actions as aimed measures and then analyses them accordingly.

Conservation of sensitive habitats, species and sites (SAP/BIO Objective 2)

There are five priority measures (so-called priority actions) regarding the conservation of sensitive habitats, species, and sites identified in the SAP/BIO, which are (a) updating, coordinating and enforcing legislation to conserve biodiversity; (b) developing actions to conserve threatened and endangered coastal and marine Mediterranean species; (c) protecting marine and coastal sites of particular interest; (d) declaring and developing new coastal and marine protected areas including in the high seas; and (e) developing existing marine and coastal protected areas.

The SAP/BIO Analysis found that regarding updating, coordinating, and enforcing legislation to conserve biodiversity and developing actions to conserve threatened and endangered coastal and marine Mediterranean species, most of the countries in the region have passed laws protecting biodiversity, but that implementing measures are often lacking, regardless various guidelines and tools developed by different regional bodies, such as RAC/SPA, ACCOBAMS and GFCM.

In relation to protecting marine and coastal sites of particular interest, the SAP/BIO Analysis highlighted the achievements of the MedMPA²², MedPAN South²³ and MedMPAnet²⁴ Projects. MedPAN is noted as an international network that brought together the managers of Mediterranean Marine Protected Areas (MPAs) in order to support them in their management activities.

Regarding declaring and developing new coastal and marine protected areas, including in the high seas, the SAP/BIO Analysis highlights that while most southern and eastern Mediterranean countries

²⁰ SAP/BIO Implementation: the first decade and the way forward (as reviewed by the National Correspondents of SAP/BIO in July 2013), document UNEP(DEPI)/MED WG.382/5

²¹ SAP/BIO Implementation: the first decade and the way forward (as reviewed by the National Correspondents of SAP/BIO in July 2013), document UNEP(DEPI)/MED WG.382/5

²² <http://medmpa.rac-spa.org/>

²³ http://mediterranean.panda.org/about/marine/marine_protected_area/the_medpan_south_project/

²⁴ <http://medmpanet.rac-spa.org/>

have introduced programmes to identify sites on which they intend to create Marine and Coastal Protected Areas with the assistance of RAC/SPA and the International Union for Conservation of Nature (IUCN), and these sites were included in the national programmes to develop protected areas, the procedures to set up Protected Areas are lengthy, and for marine areas outside of national jurisdiction, processes of negotiation between states make the procedure even longer.

Still, the number of Marine and Coastal Protected Areas has increased in the Mediterranean. A recent analysis done in 2012 by MedPAN and RAC/SPA showed that since 2008, 23 new Marine Protected Areas have been created in 10 Mediterranean countries, and 55 others are planned.

In addition, 11 Ecologically or Biologically Significant Areas (EBSAs) were identified in the Mediterranean in 2010 by the SPA Focal Points, and that number grew in April 2014 to 17 drafted ones by the Joint CBD-UNEP/MAP Mediterranean Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas. The 12th Conference of the Parties (COP 12) to the Convention on Biological Diversity (CBD) in Pyongchang, Republic of Korea (October, 2014) adopted a decision on EBSAs that includes in an Annex 15 Mediterranean EBSAs that have been registered in the EBSAs Repository, established by the CBD. Moreover, a total of 4 concrete areas were declared by the GFCM as Fisheries Restricted Areas, which also cover open sea areas, and were added to a ban of trawling and dredging gears in the entire Mediterranean basin for areas deeper than 1000 m.

The SAP/BIO Analysis states that regarding the development of existing marine and coastal protected areas, the active assistance of RAC/SPA, World Wide Fund for Nature (WWF), MED POL, and MEDPAN and projects executed by them, mainly with the financial support of the European Union (EU), French Global Environment Facility (FFEM), Spanish Agency for International Development Cooperation (AECID) and MAVA Foundation²⁵, enabled southern and eastern Mediterranean countries to improve the management of Marine and Coastal Protected Areas, with management plans for the Marine and Coastal Protected Areas in place in most of the Mediterranean.

The MedPAN network has been strengthened also, and it now functions as a network between the managers of Mediterranean marine areas. It has the means to encourage exchanges between managers.

Despite these efforts and developments however, due to lack of further adequate funding, the level of management of the Marine and Coastal Protected Areas is still insufficient based on the SAP/BIO Analysis.

Assessing and mitigating the impact of threats on biodiversity (SAP/BIO Objective 3)

In relation to assessing and mitigating the impact of threats on biodiversity, SAP/BIO has identified twelve (12) priority actions (measures), as follows:

1. Monitor of global trade and economic policies and trends from a Mediterranean perspective, to analyse their scope and probable effects on biodiversity;
2. Establish a regional monitoring programme following up the socio-economic impact of changes in biodiversity;
3. Assess the potential impact of climate change and rise in sea level on Mediterranean coastal and marine biodiversity;
4. Assess the potential impact of threats on Mediterranean coastal and marine biodiversity;
5. Mitigate the direct impact of international trade in endangered species;

²⁵ Since 2003, three regional projects have been implemented by RAC/SPA, the WWF MED POL and MedPAN to help the countries of the southern and eastern Mediterranean improve the management of Marine and Coastal Protected Areas. These projects, which enjoyed financial support from the European Commission, the FFEM, the AECID and the MAVA Foundation, gave support for the crafting of zoning and management plans and for training managers

6. Control and mitigate the introduction and spread of alien and invasive species;
7. Control and mitigate coastal urbanization and construction of coastal infrastructure;
8. Control and mitigate the effect of changes in land use;
9. Promote eco- and soft tourism, control and mitigate impact of recreational activities;
10. Assess and elaborate strategies to prevent the environmental impact of sources of pollution;
11. Control and regulation of aquaculture practices;
12. Assessment, control and elaboration of strategies to prevent impact of fisheries on biodiversity.

On monitoring global trade and economic policies and trends from a Mediterranean perspective, to analyse their scope and probable effects on biodiversity, and regarding establishing a regional monitoring programme following up the socio-economic impact of changes in biodiversity the SAP/BIO Analysis concluded no major achievements.

On the monitoring programme, following up socio-economic impact of changes in biodiversity, it has to be noted that Plan Bleu in 2014 concluded a Socio-Economic Analysis and that a monitoring programme is currently being developed in the EcAp process for biodiversity, but this monitoring programme does not fall under the scope of the current EcAp Measures Gap Analysis.

In relation to assessing the potential impact of climate change and rise in sea level on Mediterranean coastal and marine biodiversity, the SAP/BIO Analysis highlights as achievements the RAC/SPA supported studies undertaken on the impact of climate change on the marine environment, the specific report series developed on it by RAC/SPA²⁶, as well as relevant international reports of the Intergovernmental Panel on Climate Change (IPCC)²⁷ and the fact that some countries start to monitor the variation in sea level (e.g. monitoring the sea level (for example in Italy).

In addition, it has to be noted that RAC/SPA has established a bibliographic database on climate change impacts²⁸ and, in addition to the report mentioned above, RAC/SPA also developed through three sub-regional meetings sub-regional syntheses on the issue²⁹.

In relation to assessing the potential impact of threats on Mediterranean coastal and marine biodiversity, the SAP/BIO Analysis highlights that while most of the countries of the region have identified in their territories those marine areas that are undergoing major pollution such as hot spots. For the other types of threat, the inventory of vulnerable areas has only been made on limited parts of the coast, often as part of the coastal management programmes.

Unfortunately the SAP/BIO Analysis also notes that in relation to the 3 other regional projects recommended by SAP/BIO (UNEP/MAP RAC/SPA 2003, pg 47), no organisation has taken the initiative of developing them due to budgetary restrictions.

In relation to controlling and mitigating coastal urbanization and construction of coastal infrastructure and controlling and mitigating the effect of changes in land use, the SAP/BIO Analysis recalls as a major achievement the adoption of the ICZM Protocol and it also states that while the number of countries passing national laws in this area has grown, for most of the countries of the region controlling coastal development remains a major challenge.

As additional specific achievements, the SAP/BIO Analysis recalls the PAP/RAC coordinated coastal development projects (CDPs). Since 2003, its CDPs have been achieved in Algeria, Cyprus, Lebanon, Malta, Montenegro, Morocco Slovenia and Spain. These CDPs can be added to those implemented

²⁶ http://rac-spa.org/sites/default/files/doc_climate_change/ccd_synthesis.pdf

²⁷ See for example: http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch5s5-3-2-4.html

²⁸ <http://rac-spa.org/biblio>

²⁹ <http://rac-spa.org/nfp9> and <http://rac-spa.org/publications#en12>

before 2003 in Albania, Croatia, Egypt, Greece, Syria, Tunisia and Turkey. In addition, it states that as part of the SMAP Programme, some projects to craft integrated management plans for coastal areas have been funded since 2003.

In addition, the SAP/BIO Analysis also mentions that the European Space Agency (**ESA**) launched **GlobWetland I** (2003, completed) and **GlobWetland II** (2010, in progress) projects³⁰ to support the implementation of the Convention on Wetlands of International Importance (so-called **Ramsar Convention**)³¹.

In relation to mitigating the direct impact of international trade in endangered species, the SAP/BIO Analysis found that while considerable research results have been published mostly by Northern Mediterranean countries and that most Mediterranean countries have bodies to enforce the Convention on International Trade in Endangered Species (**CITES**) measures concerning the checking of imports and exports of endangered species, the enforcement is lacking in many cases (lack of training for the agents of the checking authorities at ports, airports, and other border crossing points was identified as a main gap).

Regarding control and mitigation of the introduction and spread of alien and invasive species, please see later this Chapter, part B.

In relation to controlling and mitigating coastal urbanization and construction of coastal infrastructure and controlling and mitigating the effect of changes in land use, the SAP/BIO Analysis recalls as a major achievement the adoption of the Integrated Coastal Zone Management (**ICZM**) Protocol (for more information (see also part IV.3.A of this document) and it also states that while the number of countries passing national laws in this area has grown, for most of the countries of the region, controlling coastal development remains a major challenge.

Regarding promoting eco- and soft tourism, and controlling and mitigating impacts of recreational activities, the SAP/BIO Analysis concluded that while the promotion of ecotourism is a priority in several countries of the region and many actions have been implemented over the past few years, including the revision of categories of tourist facilities by introducing ecotourism-specific categories, the introduction of labels linked to sustainable tourism and ecotourism remains limited in the Mediterranean and the strong pressure of mass tourism developed in many Mediterranean coastal areas has had a negative impact on the development in this area.

For specific activities undertaken on the regional level, the SAP/BIO Analysis recalls the Plan Bleu led 'Tourism' activities programme, which has organised several workshops and crafted several documents on sustainable tourism in the Mediterranean. The Analysis also recalls the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (**REMPEC**) guidelines on pleasure boating and marinas in the Mediterranean, as well as the ACCOBAMS feasibility studies for developing pilot projects of whale watching in Morocco and Tunisia with the view to develop synergies with ecotourism and pescatourism. In addition, it notes that several organisations (IUCN, WWF, MED POL, MedPAN) help Mediterranean Protected Areas develop sustainable ecotourism activities. Furthermore, for the EU countries, it notes the achievements through the European Destinations of Excellence project (**EDEN**), which encourages development models of sustainable tourism in the European Union.

Tourism, which has been identified as key sector in the Mediterranean region, is also one of the pillar sectors of the SCP Action Plan. The operational objective for Tourism in the Action Plan is to achieve making Tourism, based on an integrated and sustainable approach, the model of tourist development in the Mediterranean, becoming a comparative advantage by attracting visitors to the region, and direct

³⁰ <http://www.globwetland.org/>

³¹ The GlobWetland II produces of a number of wetland related geo-information maps and indicators, including over 200 coastal wetlands from the Southern and Eastern part of the Mediterranean basin, extending from Morocco to Turkey less than 100 km from the coastline (<http://dup.esrin.esa.it/prjs/prjs123.php>)

contributor to the protection of the biodiversity and vulnerable habitats. To this end, the SCP Action Plan will develop a set of measures to achieve this operational objective at the region level.

In relation to assessing and elaborating strategies to prevent the environmental impact of sources of pollution please see Part IV.2. of this Document.

The SAP/BIO Analysis in addition notes here that the issue of the environmental impact of seawater desalination operations is handled in many countries through national legislation on environmental impact studies and that in relation to marine litter very few actions are mentioned at the national level in the countries' National Reports, and that regardless of international efforts (including work of ACCOBAMS) the issue of noise at sea is not yet given sufficient attention in the Mediterranean either.

Regarding control and regulation of aquaculture practices, the SAP/BIO Analysis finds that the widespread development of fish farming in the Mediterranean has not yet been accompanied in most of the countries by measures to control the harmful effects of this activity on the environment while encouraging this sector of activity to develop (please also see part II of this document on the socio-economic impacts of aquaculture practices).

It also states that while in most of the Mediterranean countries the setting up of fish farms is subject to an environmental impact study, only a few countries have integrated the setting aside of sites for fish farming in the context of integrated spatial planning of the marine area.

In addition, under regional efforts the SAP/BIO Analysis notes that the General Fisheries Commission for the Mediterranean (**GFCM**) has a Committee on Aquaculture that has launched several initiatives on indicators.

Regarding assessment, control, and elaboration of strategies to prevent impact of fisheries on biodiversity, the SAP/BIO Analysis underlines the important role of SAP/BIO and GFCM, as well as of the EU Common Fisheries Policy and fisheries related research projects, such as Mediterranean international trawl survey programme (**MEDITS**)³², which increased knowledge about vulnerable fish stocks. It notes as one of the gaps still not filled the control of recreational fishing activities, stating that recent recommendations made by GFCM and the International Commission for the Conservation of Atlantic Tunas (**ICCAT**) could soon be followed by national measures (please also see part II of this document on the socio-economic impacts of fisheries).

The SAP/BIO Analysis also underlines the strong collaboration with GFCM from 2008 on with aiming measures adopted to reduce the impact of fishing on biodiversity and recalls that in 2011 GFCM adopted binding recommendations to mitigate bycatch of marine turtles³³, birds³⁴ and monk seals³⁵ and in 2012 adopted a recommendation on by catch of cetaceans³⁶. It also launched activities for the conservation of elasmobranch, which ended up in the adoption of a recommendation in 2012³⁷ that contains fisheries management measures for conservation of sharks and rays in the GFCM area.

Developing Research to complete knowledge and fill in gaps on biodiversity (SAP/BIO Objective 4/Target 3)

³² <http://www.sibm.it/SITO%20MEDITS/principaleprogramme.htm>

³³ [Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area](#)

³⁴ [Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area](#)

³⁵ [Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal \(*Monachus monachus*\) in the GFCM Competence Area](#)

³⁶ [Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area](#)

³⁷ [Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area](#)

Under the objective of developing research to complete knowledge and fill in gaps on biodiversity, two priority actions (priority measures) were identified by the SAP/BIO, namely (a) improve and coordinate research on biodiversity; and (b) improve taxonomic expertise in the region.

Regarding the improvement and coordination of research on biodiversity, the SAP/BIO Analysis welcomed the SoER-MED, which identified specific knowledge gaps (for more on the SoER-MED please see part III of this document).

The SAP/BIO Analysis also notes that, despite the scientific programmes implemented to get a better knowledge of Mediterranean biodiversity, several areas in the Mediterranean are still inadequately studied, with the main gaps concerning the southern and eastern Mediterranean, the sizes of the populations of certain species and their distribution (for example cetaceans³⁸), and the biodiversity of the deep sea areas.

Recent expert meetings in the framework of EcAp also highlighted not only the need of further improving coordination of research projects on biodiversity, but also the need of strengthening the science-policy interface. It is interesting to note in this regard that the recent Science and Technology Advancing Governance Good Environmental Status (**STAGES**) project³⁹ analyses some options on how to make the interface better functioning, highlighting that Regional Conventions could play a more active role in fostering knowledge brokering at regional/sub-regional level.

Regarding improving taxonomic expertise in the region, the SAP/BIO Analysis concludes that while some training courses on taxonomy were organised with the support of RAC/SPA and since 2003 some taxonomical works have been crafted in the Mediterranean on invertebrate and algal groups, the Master's and Doctoral programmes on taxonomy recommended by RAC/SPA have not yet been introduced and taxonomy still does not seem to attract students in the Mediterranean, with lack of Master's and Doctoral grants in this field.

It has to be noted that the recent expert meetings in the framework of EcAp also highlighted the importance of taxonomic expertise for the development of the Integrated Monitoring and Assessment Programme in the region, stating the shortage of relevant experts and the lack of awareness of the importance of taxonomy.

Capacity building, coordination and technical support (SAP/BIO Objective 4/Target 4)

In relation to the capacity building, coordination and technical support objective/target, the SAP/BIO underlines two priority actions (measures), namely (a) achieve 'clearing-house' mechanism to focus on marine and coastal conservation activities and (b) coordinate and develop common tools to implement NAPs.

The SAP/BIO Analysis states that Clearing House Mechanisms (**CHM**) on biodiversity were set up in several countries, including Egypt, France, Italy, Morocco, Spain, Tunisia, Turkey and the European Union, while RAC/SPA has developed a CHM for the whole Mediterranean. However, the lack of financial resources still continue to be a problem in this area too, with dispersal of information on biodiversity between several administrations, research centres, and other actors identified as a main gap⁴⁰.

³⁸ Please note that regarding protected areas for cetaceans, despite the identification of 22 areas of special interest for cetaceans in the ACCOBAMS area, in some areas of the Mediterranean and the Black Sea there is no data available currently. This will be addressed during the upcoming workshop on "the effectiveness of protected areas containing critical habitats for cetaceans" to be held in June 2015, in collaboration with MedPAN, RAC/SPA, and other relevant organizations.

³⁹ <http://www.stagesproject.eu/>

⁴⁰ Most of the Exchange Centres on biodiversity in the countries of the southern Mediterranean were set up with the support of the UNDP in the context of GEF funding.

Regarding coordinating and developing common tools to implement the biodiversity related NAPs, the SAP/BIO Analysis concludes that this priority action has not been implemented mainly because of the unavailability of financial resources.

Information and Participation (SAP/BIO Objective 5 /Target 4)

In relation to information and participation, the SAP/BIO establishes three priority actions (measures), (a) to facilitate the access to information for managers and decision-makers, as well as stakeholders and the general public, (b) promote public participation within an integrated management scheme and (c) conserve the traditional knowledge of the various actors.

The SAP/BIO Analysis concludes that while very little has been done to facilitate access to information for managers, decision-makers, stakeholders, and general public and while still much remains to be done, there are some achievements in the field of promoting public participation, as in many Mediterranean countries the public has stepped up its participation in decisions concerning the environment. This has been seen in Non-Governmental Organization (NGO) participation in managing or decision-making on Protected Areas, and in some countries public consultation is a phase in an Environmental Impact Study.

Regarding conserving the traditional knowledge of the various actors, the SAP/BIO Analysis states that while very little has been recorded since 2003 for this priority action in general, there have been achievements in relation to wetlands, thanks to the MedWet Initiative and its MedWet Culture Network, which aims to enable different Mediterranean actors to exchange practices and information. In addition, the Mediterranean Institute for Nature and Anthropos (**Med-INA**) is also noted as a contributor to this action, as it aims to promote cultural values that benefit both man and nature and has published in 2011 the book "Culture and wetlands in the Mediterranean: an evolving story" (<http://www.med-ina.org/PUBLICATIONS.aspx>).

In addition, the SAP/BIO Analysis also welcomes the 2010 Med-INA project, supported by the MAVA Foundation and the MedWet Initiative, on the potential use of cultural values in catalysing and strengthening wetland restoration efforts through better public sensitisation and attraction of visitors.

Awareness raising (SAP/BIO Objective 6 /Target 5)

In relation to awareness-raising, the SAP-BIO establishes two priority actions (measures): (a) to develop international collaboration in order to enhance regional public awareness and (b) to organise coordinated Mediterranean-level campaigns focusing on specific regional biodiversity issues (addressed both to specific stakeholders and to the general public).

The SAP/BIO Analysis found that while unfortunately achievements in relation to both of these priority measures are still limited due to lack of funding, there has been more progress in relation to organizing coordinated Mediterranean campaigns focusing on specific regional biodiversity issues.

The SAP/BIO Analysis notes in relation to the latter that public awareness and environment education are some of the most implemented actions for the conservation of species, habitats, and biodiversity in general and, with local and national NGOs, are the main actors in this field, but there is a lack of coordination between the actors and therefore a lot of duplication of effort and unbalanced distribution, and a lack of environmental education of journalists, which hinders awareness raising efforts.

As a best practice, the SAP/BIO Analysis notes MedWet, a forum of 27 Mediterranean countries, specialized wetland centres, and international environmental organizations which collaborate for the conservation of Mediterranean wetlands through local, national, regional, and international collaborations. This forum is promoting and facilitating the implementation of activities that contribute to the conservation of Mediterranean wetlands within the framework of the Ramsar Convention.

The SAP/BIO and its NAPs relate to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1;
- Decrease in the main human causes of the habitat decline ;
- No human induced significant deviation of population abundance and density from reference conditions⁴¹;
- The species composition shows a positive trends towards reference condition over an increasing proportion of the habitat (for recovering habitats);
- The distribution of Monk Seals remains stable or expanding, and the species is re-colonizing areas with suitable habitats;
- Human activities that have the potential to exclude **marine mammals** from their natural habitat within their range area or to damage their habitat are regulated and controlled;
- Conservation measures implemented for the zones of importance for **cetaceans**⁴²;
- Fisheries management measures that strongly mitigate the risk of incidental taking of **monk seals and cetaceans** during fishing operations are implemented;
- No significant shrinkage in the population distribution in the Mediterranean in all indicator species (**birds**).
- And for colonial-breeding seabirds (i.e., most species in the Mediterranean): New colonies are established and the population is encouraged to spread among several alternative breeding sites (**birds**);
- **Turtle** distribution is not significantly affected by human activities;
- **Turtles** continue to nest in all known nesting sites;
- Protection of known nesting, mating, foraging, wintering, and developmental **turtle sites**;
- Human activities that have the potential to exclude marine turtles from their range area are regulated and controlled;
- The potential impact of climate change is assessed (**reptiles**);
- Populations recover toward natural levels (**marine mammals**);
- No human induced decrease in population abundance. Population recovers towards natural levels where depleted (**birds and reptiles**);
- The total number of individuals is sparse enough in different spots (**birds**);
- Decreasing trends in human induced mortality (**marine mammals**);
- Species populations are in good condition : Low human induced mortality, balanced sex ratio and no decline in calf production (**cetaceans**);
- Species populations are in good condition : Low human induced mortality, appropriate pupping seasonality, high annual pup production, balanced reproductive rate and sex ratio (**monk seal**);
- Population of all taxa particularly those with IUCN threatened status are maintained in long term following the indication of population models (**birds**);
- Incidental catch mortality is at negligible levels, particularly for species with IUCN threatened status (**birds**);
- Measures to mitigate incidental catches in **turtles** implemented;
- The number of species and abundance of IAS⁴³ introduced as a result of human activities is reduced;
- Improved management of the main human related pathways and vectors of NIS;

⁴¹ Natural distributional range to be defined by COP19.

⁴² A specific workshop on “the effectiveness of protected areas containing critical habitats for cetaceans” will be held in June 2015, organized by ACCOBAMS in collaboration with MedPAN, RAC/SPA and other relevant organizations

⁴³ Invasive Alien Species (IAS)

- Introduction (Mediterranean Strategy for the management of ballast waters, Aquaculture early warning systems, etc.);
 - Action plans developed to address high risk NIS, should they appear in the Mediterranean;
- Abundance of NIS introduced by human activities reduced to levels giving no detectable impact.

1.1.2 Action Plans related to Biodiversity

Action Plan for the management of the Mediterranean Monk Seal⁴⁴

As one of the oldest Action Plans in the region, the **Action Plan for the management of the Mediterranean Monk Seal⁴⁵** lays out the measures needed for the protection of the monk seal⁴⁶, such as information campaigns with fishermen, enforcement of regulations against illegal fishing practices, improved fishing nets, establishment of a network of marine reserves covering potential monk seal habitats, strengthening of research, data, and rehabilitation, and other information programmes. The main aims of the Plan thus are to reduce the adverse pressures and ensure the gradual recovery of the species through the implementation of a number of immediate and long-term actions.

Within the implementation of this Action Plan, RAC/SPA has assisted countries to carry out actions for the protection of species through data collection, research, and awareness. RAC/SPA also has organized several meetings and produced a number of documents on the status of the species at different times. Recently, RAC/SPA efforts focused on improving knowledge on the status of the species, training national partners, public awareness, and identifying potential critical habitats in low-density areas (Albania, Algeria, Cyprus, The State of Libya, Syria and Tunisia).

This Action Plan relates to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1;
- Decrease in the main human causes of the habitat decline;
- No human induced significant deviation of population abundance and density from reference conditions⁴⁷;
- The species composition shows a positive trends towards reference condition over an increasing proportion of the habitat (for recovering habitats);
- The distribution of Monk Seal remains stable or expanding and the species is re-colonizing areas with suitable habitats;
- Human activities that have the potential to exclude **marine mammals** from their natural habitat within their range area or to damage their habitat are regulated and controlled;
- Populations recover toward natural levels (**marine mammals**);
- Decreasing trends in human induced mortality (**marine mammals**);
- Species populations are in good condition: Low human induced mortality, appropriate pupping seasonality, high annual pup production, balanced reproductive rate and sex ratio (**monk seal**).

Action Plan for the Conservation of Mediterranean Marine Turtle

The Mediterranean countries, within the framework of the Mediterranean Action Plan, adopted in 1989 the **Action Plan for the Conservation of Mediterranean Marine Turtle**, which was updated in

⁴⁴ http://rac-spa.org/sites/default/files/action_plans/monkap.pdf

⁴⁵ http://rac-spa.org/sites/default/files/action_plans/monkap.pdf

⁴⁶ The monk seal is an endangered species. It is on the I.U.C.N. list of the twelve animal species in the world that are in greatest danger of extinction.

⁴⁷ Natural distributional range to be defined by COP19.

2006 to reflect experience and information gained since it was first implemented in 1999. The evaluation by country as well as a report on the evaluation can be found on the website of RAC/SPA.⁴⁸

One of the reasons for updating the Action Plan was that knowledge and dissemination of information on turtles has been increasing rapidly since the Action Plan was initially adopted in 1998, with more widespread application of up-to-date technologies in genetic research and satellite tracking. In addition, more work on more traditional research and conservation lines in turtle biology and behaviour has resulted in an unprecedented accumulation of knowledge. There also has been a proliferation of activities related to turtle conservation, both on land and, more recently, at sea. These now cover much of the Mediterranean and focus on most aspects of conservation and monitoring.

RAC/SPA has been holding annual capacity building programmes to train country-nominated scientists on Conservation Techniques and Beach Management. RAC/SPA also directly helped a variety of programmes for surveying, monitoring, and research in several countries.

The publication by RAC/SPA of guidelines for legislation for protecting turtles, setting up and improving Rescue Centres, and Sea Turtle Handling by Fishermen (the Fishermen's Handbook), among others, was aimed at helping the Contracting Parties implement the Action Plan. These have been translated into different languages, according to needs.

Furthermore, in order to help with tagging issues, RAC/SPA set up a tagging working group that met in Kemer (Antalya, Turkey) and came up with a set of tagging guidelines aimed at putting tagging issues into perspective, by recommending acceptable tagging techniques and avoiding pointless and hazardous tagging activities. The tagging recommendations of the workshop were adopted by the UNEP/MAP National Focal Point meeting and ultimately by the Contracting Parties meeting.

RAC/SPA, in order to assess again the implementation status of the Plan, sent out a Questionnaire to Contracting Parties. The answers will provide key understanding on the next steps, towards understanding the real problems that need to be solved both at the regional and at the national and local levels for effective actions.

This Action Plan relates to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1;
- Decrease in the main human causes of the habitat decline;
- No human induced significant deviation of population abundance and density from reference conditions;⁴⁹
- The species composition shows a positive trends towards reference condition over an increasing proportion of the habitat (for recovering habitats);
- **Turtle** distribution is not significantly affected by human activities;
- **Turtles** continue to nest in all known nesting sites;
- Protection of known nesting, mating, foraging, wintering and developmental **turtle sites**;
- Human activities that have the potential to exclude marine turtles from their range area are regulated and controlled;
- The potential impact of climate change is assessed (**reptiles**);
- Measures to mitigate incidental catches in **turtles** implemented.

Action Plan for the conservation of cetaceans in the Mediterranean Sea⁵⁰

⁴⁸ http://rac-spa.org/marine_turtles

⁴⁹ Natural distributional range to be defined by COP19.

⁵⁰ Please note that this Action Plan is planned to be revised in 2014/2015 by ACCOBAMS and RAC/SPA

The Action Plan for the conservation of cetaceans in the Mediterranean Sea⁵¹ was adopted by the Contracting Parties in 1991, while its further implementation needs were elaborated by the National Focal Points Meetings for Specially Protected Areas through the adoption of a series of additional points for the implementation of the Action Plan, which have been annexed to it and will be considered as an integral part of it. This Action Plan accordingly recommends various measures to conserve cetaceans in the Mediterranean, such as prohibition of deliberate taking; prevention and elimination of pollution; elimination of incidental catches in fishing gear; prevention of over-exploitation of fishery resources; protection of feeding, breeding and calving grounds; monitoring, research and data collection and dissemination with regard to biology, behaviour, range, and habitats of cetaceans; and educational activities aimed at the public at large and fishermen.

RAC/SPA provides technical follow-up for the implementation of the Action Plan for the Conservation of Cetaceans in the Mediterranean adopted as part of the Mediterranean Action Plan. In addition, it also acts as a sub-regional coordinating unit for ACCOBAMS.

This Action Plan relates to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1;
- Decrease in the main human causes of the habitat decline;
- No human induced significant deviation of population abundance and density from reference conditions⁵²;
- The species composition shows a positive trends towards reference condition over an increasing proportion of the habitat (for recovering habitats);
- Human activities that have the potential to exclude **marine mammals** from their natural habitat within their range area or to damage their habitat are regulated and controlled;
- Conservation measures implemented for the zones of importance for **cetaceans**;
- Fisheries management measures that strongly mitigate the risk of incidental taking of **monk seals and cetaceans** during fishing operations are implemented;
- Populations recover toward natural levels (**marine mammals**);
- Decreasing trends in human induced mortality (**marine mammals**);
- Species populations are in good condition: Low human induced mortality, balanced sex ratio and no decline in calf production (**cetaceans**).

Action Plan for the conservation of marine vegetation in the Mediterranean Sea

This Action Plan is the result of a series of various initiatives at regional level that highlighted the conservation of species generally and marine vegetation in particular⁵³. As a major step, in 1996, the Annexes to the SPA/BD Protocol were adopted, among them a list of endangered or threatened species, in which 14 endangered or threatened marine vegetation species appeared. For these species, the Protocol provides for a set of measures such as scientific monitoring, inventorying, and protection notably through the control of human activities and asks for a specific Action Plan.

The Action Plan for the conservation of marine vegetation in the Mediterranean Sea⁵⁴ was adopted accordingly in 1999 and was revised in 2005 after its evaluation, which highlighted that, despite considerable efforts made by a certain number of countries, delays and shortcomings were noticed at a national level due to various constraints, including the lack of elaboration of an integrated planning strategy in national programmes, insufficient political backing, lack of public interest, conflicts of

⁵¹ http://rac-spa.org/sites/default/files/action_plans/cetaces.pdf

⁵² Natural distributional range to be defined by COP19.

⁵³ Among these initiatives we could mention the "[Livre Rouge](#), Gerard Vuignier, des végétaux, peuplements et paysages menaces de Méditerranée" in 1990.

⁵⁴ http://rac-spa.org/sites/default/files/action_plans/ap_marine_vegetation_en_fr.pdf

interest between certain departments or sectors, lack of bodies, specialists, and staff working constantly on the subjects, and an absence of funding.

This Action Plan relates to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1 ;
- Decrease in the main human causes of the habitat decline ;
- No human induced significant deviation of population abundance and density from reference conditions⁵⁵;
- The species composition shows a positive trend towards reference condition over an increasing proportion of the habitat (for recovering habitats).

Action Plan for the conservation of bird species listed in Annex II of the Protocol on Specially Protected Areas and Biological Diversity

Annex II of the SPA/BD Protocol lists the endangered or threatened species found in the Mediterranean, including 15 bird species. An “Action Plan for the conservation of bird species listed in Annex II of the Protocol on Specially Protected Areas and Biological Diversity” was elaborated for these pelagic and coastal bird species and published in 2003.

The development of this Action Plan follows various initiatives taken by other organizations⁵⁶ and has the main purpose of maintaining and/or restoring the population levels of these bird species and ensuring their long-term conservation, sharing knowledge and expertise between the Mediterranean countries, and co-ordinating efforts among the countries and other relevant initiatives and agreements.

It also encourages a synergic approach among the Mediterranean countries in the protection of these bird species and their habitats and encourages research to fill the many gaps in our knowledge concerning coastal and pelagic birds in the Mediterranean, particularly seabird distribution and their movements, feeding, moulting, and wintering areas at sea.

For that, the plan proposes many actions under the topics of (1) Protected Areas; (2) Legislation, (3) Research; (4) Advocacy, awareness raising, education, and training and (5) elaboration of NAPs.

As suggested with the adoption of the Action plan guidelines for the implementation of the actions, the management and the monitoring of the populations of birds were developed and published. The Guidelines⁵⁷ suggest for the National Action Plans actions on the above 5 fields, while the Monitoring Guidelines⁵⁸ cover the development of management plan for coastal and marine important areas to birds and/or marine and coastal Protected Areas and the monitoring threatened population of marine and coastal bird species in the Mediterranean.

RAC/SPA, through its mandate to coordinate the implementation of the Action plan and to assist the contracting countries, carried out various actions, contributing mainly to the improvement of the state of knowledge of the bird species of Annex II, with the reinforcement of the capacities of the institutions in charge of the monitoring and management of bird populations and to the awareness raising among the wider public, such as Ornithological survey (Albania), Census of wintering waterbirds (The State of Libya and Tunisia) and of ringing of Lesser crested Tern breeding population (Libya), preparation of the National Action plan (NAP) for the conservation of waterbirds in Syria, training course in identification, and census of waterbirds in the Mediterranean (The State of Libya).

⁵⁵ Natural distributional range to be defined by COP19.

⁵⁶ The development of this Action Plan follows various initiatives taken by other organizations, such as [BirdLife International](#) partners in Mediterranean countries, [WWF](#), [IUCN](#), [MedMarAvis](#), [Tour du Valat](#), on the conservation of biological diversity, particularly with respect to birds, and their important sites and habitats.

⁵⁷ http://rac-spa.org/sites/default/files/doc_birds/ap_birds_gl_national_aps_en.pdf

⁵⁸ http://rac-spa.org/sites/default/files/doc_birds/guidelines_management_monitoring_en.pdf

Furthermore, for latest updates, new Timetables of the Action Plans for conservation of marine turtles, birds and cartilaginous fishes can be found in UNEP(DEPI)/MED WG.382/8⁵⁹. In addition, under the **Slender-billed Curlew⁶⁰ Initiative**, RAC/SPA is participating in the international initiative for the species and has prepared the French version of the leaflet “A Toolkit for finding Slender-billed Curlews”, available on its website.

This Action Plan relates to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1;
- Decrease in the main human causes of the habitat decline;
- No human induced significant deviation of population abundance and density from reference conditions;⁶¹
- The species composition shows a positive trends towards reference condition over an increasing proportion of the habitat (for recovering habitats);
- No significant shrinkage in the population distribution in the Mediterranean in all indicator species (**birds**)
- And for colonial-breeding seabirds (i.e., most species in the Mediterranean): New colonies are established and the population is encouraged to spread among several alternative breeding sites (**birds**);
- No human induced decrease in population abundance. Population recovers towards natural levels where depleted (**birds and reptiles**);
- The total number of individuals is sparse enough in different spots (**birds**) ;
- Populations of all taxa, particularly those with IUCN threatened status, are maintained in long term following the indication of population models (**birds**);
- Incidental catch mortality is at negligible levels, particularly for species with IUCN threatened status (**birds**).

Action Plan for the conservation of cartilaginous fishes (Chondrichthyans) in the Mediterranean

The Action Plan for the Conservation of cartilaginous fishes (Chondrichthyans) in the Mediterranean⁶² is not only following up on the SPA/BD Protocol, but also on the International Action Plan for the conservation and management of sharks (**IPOA-Sharks**), on the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks, and on paragraph 31 of the plan to implement the resolutions of the World Summit for Sustainable Development adopted in Johannesburg in September 2002⁶³.

Seen as an implementing measure for IPOA-Sharks in the Mediterranean region, the Action Plan for the Conservation of Chondrichthyans in the Mediterranean is a suggestion for setting up regional strategies and setting out priorities and actions to be undertaken at national and regional level, for regional cooperation is necessary for ensuring that conservation methods are put into effect.

⁵⁹ <http://rac-spa.org/node/1075>

⁶⁰ The Slender-billed Curlew *Numenius tenuirostris* is Europe's and the Western Palearctic's rarest bird, its population perhaps numbering less than 50 individuals. It is one of the five bird species in Europe, and 190 bird species in the world, most threatened with global extinction, being classified as 'critically endangered' by BirdLife International and IUCN. It is also listed in Annex II of the SPA/BD Protocol.

⁶¹ Natural distributional range to be defined by COP19.

⁶² http://rac-spa.org/sites/default/files/action_plans/elasmo.pdf

⁶³ Within the framework of the Barcelona Convention, some chondrichthyans are already protected, mainly the great white shark (*Carcharodon carcharias*), the basking shark (*Cetorhinus maximus*), and the Mediterranean Manta ray (*Mobula mobular*). Also, some Mediterranean countries have introduced specific protection measures for these species to strengthen their protected species status.

Furthermore, IPOA-Sharks suggest that FAO member states develop National Action Plans when their fishing fleets catch sharks, either intentionally or accidentally. In compliance with this suggestion, the Action Plan strongly recommends the elaboration of National Action Plans to ensure the conservation and management of chondrichthyan resources in their environment as well as their sustainable use. Implementing the Action Plan involves a large number of partners, and its success requires increased cooperation between the various jurisdictions, commercial fishermen, environmental and conservation bodies, associations of sports and recreational fishermen, scientific and research organizations, and military and administrative structures at a national, regional and international level. An **updated implementation timetable** for the implementation of this Action Plan was set for the period going from 2010 to 2013⁶⁴.

This Action Plan relates to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1;
- Decrease in the main human causes of the habitat decline;
- No human induced significant deviation of population abundance and density from reference conditions⁶⁵;
- The species composition shows positive trends towards reference condition over an increasing proportion of the habitat (for recovering habitats).

Action Plan for Coralligenous and other Calcareous Bio-Concretions

This Action Plan⁶⁶ was adopted during the COP15 held in Almeria 2008. The main objectives of the Action plan are to allow the conservation of the coralligenous and others calcareous bio-concretions in the Mediterranean Sea, raise solidarity and scientific cooperation between States, and increase the knowledge concerning these assemblages, which are all essential prerequisites in order to implement efficient management measures.

The Action Plan is devoted to coralligenous assemblages and maërl beds, except the surface bio-concretions already included in the Action Plan for the conservation of marine vegetation in the Mediterranean Sea.

This Action Plan relates to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1;
- Decrease in the main human causes of the habitat decline;
- No human induced significant deviation of population abundance and density from reference conditions⁶⁷;
- The species composition shows positive trends towards reference condition over an increasing proportion of the habitat (for recovering habitats).

Dark Habitats Action Plan

The Action Plan for the conservation of Habitats and Species associated with seamounts, underwater caves and canyons, aphotic engineering benthic invertebrates and chemo-synthetic phenomena, in the

⁶⁴ http://rac-spa.org/sites/default/files/doc_fish/timetable_fish_2010_2013.pdf

⁶⁵ Natural distributional range to be defined by COP19.

⁶⁶ http://rac-spa.org/sites/default/files/action_plans/pacoralligene.pdf

⁶⁷ Natural distributional range to be defined by COP19.

Mediterranean Sea⁶⁸ was adopted in 2013 and is advocated to the conservation of the aforementioned habitats and species

The objectives of the Action Plan are to:

- ◁ Conserve the habitats' integrity and functionality (favourable state of conservation) by maintaining the main ecosystem services and their interest in terms of biodiversity through the establishment firstly of legislative measures and the setting up of MPAs, and secondly and foremost the application and development of regulatory procedures to restrict or prohibit some human activities if they exist.
- ◁ Conserve the habitats' integrity, functionality (favourable state of conservation) by maintaining the main ecosystem services and their interest in terms of biodiversity
- ◁ Encourage the natural restoration of degraded habitats via reduction of human origin impacts
- ◁ Improve knowledge about dark populations (e.g. location, specific richness, functioning, typology) through national and regional data and scientific work in accordance with the objective of establishing a summary of knowledge of dark populations and their distribution around the Mediterranean in the form of a geo-referenced information system

The first Mediterranean Symposium on the conservation of Dark Habitats was held in Portorož (Slovenia, 31 October 2014)⁶⁹ and drew attention on the necessity of improving knowledge on the dark populations and their distribution in the Mediterranean in order to establish international cooperation networks and to facilitate sharing the experiences between the different Mediterranean countries. It helped to collect existing information on the distribution of canyons, caves and escarpments, the connectivity between dark habitats populations, their biodiversity, and their community's functioning. A particular attention was also given to the pressures on these different types of habitats and to the possibility of their impact evaluation.

Regarding monitoring issues addressed through initial activities on knowledge retrieving within this action plan, available information allows mentioning several topics:

Surveys should be planned in caves where no data are available, and regular monitoring activities should be carried out in caves where historical information is available, in order to obtain continuous data series that will supply useful indications on the health status of the cave communities and to highlight change in the cave ecosystem following global and local impacts;

The use of Cave Ecosystem Based Quality Index allows the monitoring of the ecological state of caves and the effects of disturbances over large geographic and temporal scales.

A zoological data exploitation system has been developed for the purpose of optimising biological analysis on images retrieved from ROV surveys in a systematic and homogeneous way, banking all the data, facilitating their interconnection, consulting, and retrieving the information. It is a tool that facilitates the reference state and the monitoring of a site, enabling temporal and spatial comparisons in dark habitat environments

This Action Plan relates to the following EcAp Targets:

- The ratio Natural/observed distributional range tends to 1;
- Decrease in the main human causes of the habitat decline;
- No human induced significant deviation of population abundance and density from reference conditions⁷⁰;

⁶⁸ http://rac-spa.org/sites/default/files/action_plans/dark_habitats_ap.pdf

⁶⁹ http://rac-spa.org/sites/default/files/symposium/proc_1_dark_habitats_final.pdf

⁷⁰ Natural distributional range to be defined by COP19.

The species composition shows a positive trend towards reference condition over an increasing proportion of the habitat (for recovering habitats).

1.1.3 MPAs and SPAMIs

The MedPAN-RAC/SPA inventory made on Marine Protected Areas (MPAs) in 2011⁷¹ identified: 161 MPAs designated under a legal national designation; 31 of which also have an international designation (SPAMI, Biosphere Reserve), 9 MPAs which just have an international designation and no national designation, thus making a total of 170 MPAs. According to the status of Marine Protected Areas in the Mediterranean Sea 2012, since 2008 to 2011 23 new MPAs were established in 10 countries, covering 6 754 km² which represents close to a 7% increase of the protected surface area in 5 years in comparison to the 2008 figures.

Those 170 MPAs identified currently cover a total marine surface area of 106 465 km². There are in addition 507 Natura 2000 sites at sea, covering 25243km², raising the total number of protected areas to 677. Also, 55 new MPAs were being planned in 2011. RAC/SPA has been entrusted with reviving the creation of MPAs and extending their network, particularly in the southern and eastern Mediterranean.

These figures do not take into account the 5 fisheries restricted areas created by the GFCM (17 677 km² – or 0.7% of the Mediterranean, nor its deep sea trawling exclusion area –58% of the Mediterranean Sea). In addition, a Resolution of 2013⁷² by GFCM established the framework for cooperation between UNEP/MAP and GFCM when a SPAMI overlaps with an area with fisheries restrictions such as GFCM-FRAs in order to avoid possible conflicts of interests.

The Parties to the Convention on Biological Diversity (CBD) agreed in 2004 to take action to address the under representation of marine ecosystems in the global network of protected areas. In this context, they adopted the 2012 target for MPAs that invites countries to achieve by 2012 a global network of comprehensive, representative, and effectively managed national and regional protected area systems.

RAC/SPA has been supporting the Mediterranean countries to achieve the CBD's 2012 target by establishing a representative network of MPAs in the Mediterranean Sea. The programme of work of MPAs was elaborated by RAC/SPA in consultation with the International Union for the Conservation of Nature (IUCN) Centre for Mediterranean Cooperation, WWF-MED POL, MedPAN and ACCOBAMS. It takes into account the information on MPAs available in the databases and documentation of these organisations.

This work program was adopted in 2009 by the Contracting Parties with the following four elements:

- ◁ Element 1: To assess the representativeness and effectiveness of the existing Mediterranean network of marine and coastal protected areas⁷³;
- ◁ Element 2: To make the Mediterranean network of marine and coastal protected areas more comprehensive and more representative of the ecological features of the region;

⁷¹ Gabrié C., Lagabrielle E., Bissery C., Crochelet E., Meola B., Webster C., Claudet J., Chassanite A., Marinesque S., Robert P., Goutx M., Quod C. 2012. The Status of Marine Protected Areas in the Mediterranean Sea. MedPAN & RAC/SPA. Ed: MedPAN Collection. 256 pp.

⁷² [Res. GFCM/37/2013/1 on area based management of fisheries, including through the establishment of Fisheries Restricted Areas \(FRAs\) in the GFCM convention area and coordination with the UNEP/MAP initiatives on the establishment of SPAMIs.](#)

⁷³ A workshop on “the effectiveness of protected areas containing critical habitats for cetaceans,” to be held in June 2015, will be organized by ACCOBAMS in collaboration with MedPAN, RAC/SPA and other relevant organizations

- ◁ Element 3: To improve the management of the Mediterranean marine and coastal protected areas;
- ◁ Element 4: To strengthen the protected area governance systems and further adapt them to national and regional contexts.

Further to the above a roadmap to achieve in 2020 the international goals of the Convention for Biological Diversity regarding MPAs in the Mediterranean was elaborated in 2013 by RAC/SPA with key partners' contribution.

SPAMIs

The SPA/BD Protocol established the List of Specially Protected Areas of Mediterranean Importance (**SPAMIs List**) in order to promote cooperation in the management and conservation of natural areas, as well as in the protection of threatened species and their habitats. The conservation of the natural heritage is then the basic aim that must characterize the SPAMIs.

According to the provisions of the SPA/BD Protocol, SPAMIs may be established in the marine and coastal zones subject to the sovereignty or jurisdiction of the Parties and in areas situated partly or wholly on the high sea. The SPAMI's List may include sites which:

- ◁ are of importance for conserving the components of biological diversity in the Mediterranean;
- ◁ contain ecosystems specific to the Mediterranean area or the habitats of endangered species;
- ◁ are of special interest at the scientific, aesthetic, cultural or educational levels.

The SPA/BD Protocol provides the criteria for the choice of protected marine and coastal areas that could be included in the SPAMI's List (Annex I of the SPA/BD Protocol) as well as the procedure and the stages to be followed with the view of including an area in the List.

According to the provisions of the SPA/BD Protocol, all the Parties to the Protocol are committed to respecting the protection and conservation measures defined in the proposal for inclusion.

Since COP18, the SPAMI List includes 33 sites, of which one encompasses an area established also on the high sea: the Pelagos Sanctuary for marine mammals.

SPAMIs in Open Seas

The aim of the Joint Management Action of the EU and UNEP/MAP, started in 2007, is to promote through the SPAMI system the establishment of a representative network of marine protected areas in the Mediterranean open seas, including the deep seas. This is a strategy to reach the Aichi 2020 target, where 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative, and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes. This is also stated in the decisions of COP 16 in Marrakesh and COP 17 in Paris regarding the Ecologically or Biologically Significant Areas (**EBSAs**) in the Mediterranean. The action is implemented by RAC/SPA.

The second phase of the action, which was completed in 2011, aimed to facilitate the process of designating as SPAMIs certain sites in areas beyond national jurisdiction included in the priority conservation areas identified during the first phase (figure above), by supporting the establishment of

agreed procedures among Parties and catalyzing working groups between neighbouring countries concerned.

The current phase, implemented as a component of the EcAp-MED project, aims to contributing to build a framework with the countries and competent organizations to facilitate the joint establishment of SPAMIs in open seas, including the deep seas, following up on the achievements of the first phase of action, in which several Southern countries have shown their willingness for transboundary cooperation for the creation of SPAMIs jointly with their European Union neighbours, notably in the areas of Alboran Sea, Adriatic Sea and Sicily Channel.

In 2015, further national and sub-regional consultation processes were facilitated to countries showing interest in areas of the Alboran Sea, Adriatic Sea, and Sicily Channel in order to support the preparation of joint SPAMI proposal in areas embracing open seas and engaging countries neighbour to EU in the process. Consultation processes are being set up through the organization of sub-regional meetings.

Pursuant to the reflections initiated with the “Approach to facilitate the preparation of joint proposals for inclusion in the SPAMI List in accordance with Article 9 of the SPA/BD Protocol”, this activity is done through a study on best practices and case studies related to the management of wide trans-boundary areas, straddle marine resources as well as marine protected areas comprising of notably large extensions of ocean

An additional activity under the EcAp-MED project is the development of a joint strategy with ACCOBAMS, IUCN, and GFCM in coordination with MedPAN on how to address the issues of common interest. The short and medium term programmes and activities of the above institutions are being jointly analysed and discussed in order to search for commonalities and future synergies favouring the conservation of pelagic and deep seas ecosystems in those areas.

Note on EBSAs

Criteria for Ecologically or Biologically Significant Areas (**EBSAs**) were agreed upon at the ninth meeting of the Conference of the Parties to the Convention on Biological Diversity (**CBD**), which was followed up by a series of regional EBSA workshops, including the latest held in the Mediterranean, in Malaga, in March 2014. The results of these subsequent workshops were discussed at the 18th Meeting of the CBD SBSTTA⁷⁴ in June 2014, and the 12th Meeting of the Contracting Parties to the CBD adopted 15 Mediterranean EBSAs in October in 2014⁷⁵.

1.1.4 MedPartnership activities related to biodiversity

MedPartnership is composed of 4 main components. Its third component is on the **Conservation of biological diversity and the implementation of SAP/BIO and related NAPs**. In this framework, MedPartnership has been coordinating the implementation of measures such as SAP/BIO and NAPs. In the document UNEP (DEPI)/MED WG. 389/7, some projects, their indicators, and end of project targets are presented.

One of the main MedPartnership projects under this component relates to the **Conservation of Coastal and Marine Diversity through the Development of a Mediterranean MPA Network (RAC/SPA and WWF-MedPO)**.

The main objective and outcome of this project is to enable countries to have the capacity to conserve regionally important coastal and marine biodiversity through the creation of an ecologically representative coherent and effective MPA network in the Mediterranean region supported by a region-wide network of MPA managers. In terms of indicators and targets; it includes the participation

⁷⁴ Eighteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the CBD : <http://www.cbd.int/doc/?meeting=sbstta-18>

⁷⁵ <http://www.cbd.int/doc/?meeting=cop-12>

of all key regional and national stakeholders in MPA creation process, the Management of MPA's strengthened in 5 pilot sites, including the finalization of 7 management plans, a minimum of 30 agreements implemented to apply MPA management learnt tools and methods through activities agreed during the regional training workshops, the on-the-job trained local personnel, the expansion of MedPAN network and the development and implementation of a communication strategy for MPAs.

The second project under this component of the MedPartnership focuses on the **Promotion of the sustainable use of fisheries resources in the Mediterranean through the application of the Ecosystem approach to Fisheries (FAO)**. The main objective of this project is to enable countries to have the capacity to sustainably utilize coastal and high seas fisheries resources through the application of the Ecosystem Approach to Fisheries, including the application of targeted interventions to reduce bycatch and unsustainable fishing. For instance, Ecosystem Approach to Fisheries (EAF) related priorities should be identified by the end of the project for the four targeted countries (Croatia, Montenegro, Tunisia and Turkey) by the staff of the main fisheries institutions in an organized process, with FAO support. It is also envisaged that Fisheries institutions in at least three of the four countries will have plans drafted that explicitly integrate EAF considerations into their work, and that the staff are able to participate in discussions on the application of EAF and also the main gaps/needs of the fisheries legal and management system relative to the application of EAF, and explain the approach of both to others. This project also aims to identify the main gaps/needs of the fisheries' legal and management system relative to the application of EAF in the four targeted countries, to identify the main patterns of by-catch of iconic and vulnerable species and/or undersized commercial species, including report elaborated and information available, to increase the level of awareness and engagement of commercial fishers regarding the importance of achieving a reduction of the bycatch of endangered/iconic species and/or undersized commercial species, and to ensure that at least 15% of all fishing trips in the selected MPA are monitored with fisher's participation using adequate design.

1.2 Non-Indigenous Species

1.2.1 Action Plan and Guidelines on Non-Indigenous/Invasive Species

For the Mediterranean, the introduction of marine non-native species is a phenomenon that has long been known and studied.

On the basis of the recommendation made by the Fifth Meeting of National Focal Points for SPAs, the initiatives of the Intergovernmental Oceanographic Commission (IOC), Food and Agriculture Organization (FAO), the IMO CBD, IUCN, and the Council of Europe, the Action Plan on Introductions of Species and Invasive Species⁷⁶ was agreed upon by the focal points meeting and was adopted by the Thirteenth ordinary meeting of the Contracting Parties to the Barcelona Convention in 2003.

The Action Plan on Introductions of Species and Invasive Species describes needed national and regional actions to address Non Indigenous Species (NIS) in the Mediterranean with a clear timeline of implementation. Measures included in the Action Plan are related to data collection, creation of national legislative and institutional frameworks, and National Action Plans related to NIS.

Regarding control and mitigation of the introduction and spread of alien and invasive species, it has to be noted that the Mediterranean was one of the first regions to undertake specific studies and prepare guidelines.

In addition, in 2008, following up on the Action Plan, RAC/SPA developed Guidelines for the Risk Analysis assessing the impacts of the introduction of non-indigenous species⁷⁷ and for controlling the

⁷⁶ The Action Plan is available here: http://rac-spa.org/sites/default/files/action_plans/invasive.pdf

⁷⁷ http://rac-spa.org/sites/default/files/doc_alien/ld_analyse.pdf

vectors of introduction into the Mediterranean of non-indigenous species and invasive marine species⁷⁸.

The “Guidelines for the Risk Analysis assessing the impacts of the introduction of non-indigenous species” describes various risk assessment approaches related to NIS, such as species level, vector-based, and path way risk assessments.

The “Guidelines for controlling the vectors of introduction into the Mediterranean of non-indigenous species and invasive marine species” builds on the relevant international regulatory framework related to ballast water and antifouling (IMO), as well as on implementing EU and national legislation in the Mediterranean basin. It describes key measures needed to control the introduction of vectors in the areas of knowledge and research, awareness raising, prevention and control, and eradication and control. In relation to the latter two, it highlights the importance of developing codes/guidelines in a participatory manner in order to reduce hull fouling of vessels as well as to develop dissemination programmes, evaluate the application of existing international hull cleaning and management measures, and develop a rapid response toolkit.

This Action Plan relates to the following EcAp Targets:

- The number of species and abundance of IAS⁷⁹ introduced as a result of human activities is reduced;
- Improved management of the main human related pathways and vectors of NIS;
- Introduction (Mediterranean Strategy for the management of ballast waters, Aquaculture early warning systems, etc.);
- Action plans developed to address high risk NIS, should they appear in the Mediterranean;
- Abundance of NIS introduced by human activities reduced to levels giving no detectable impact.

1.2.2 Mediterranean Strategy on Ships' Ballast

The Strategy on ships' Ballast Water Management (**BWM**) (the so called **Ballast Water Strategy**, as set out in UNEP (DEPI)/MED IG 20/5)⁸⁰, adopted at the COP 17, was developed to address the increase of invasive alien species in the Mediterranean with the general objective to establish a regional harmonized approach in the Mediterranean on ships' ballast water control and management, which is consistent with the requirements and standards of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (**BWM Convention**).

The Ballast Water Strategy is composed of eight Strategic Priorities, an Action Plan, and Workplan/Timetable for its implementation with a specific Annex presenting action points with a precise timetable.

The first strategic priority of the Ballast Water Strategy is *to support international instruments developed to minimize the introduction of invasive alien species in the Mediterranean*. In this regard, the Contracting Parties are requested to support the work for the minimization of the introduction of invasive alien species being carried out by the relevant organizations and forums, particularly the work

⁷⁸ http://rac-spa.org/sites/default/files/doc_alien/ld_controle.pdf

⁷⁹ Invasive Alien Species (IAS)

⁸⁰ It is underlined that this Strategy takes into account all the relevant international, regional and sub-regional instruments and mechanisms, as well as all relevant Mediterranean action plans, policies and decisions, including Decision IG 17/6 of the Contracting Parties to the Barcelona Convention related to the implementation of the ecosystem approach adopted under the Barcelona Convention and its protocols (adopted in 2008 at the 15th Ordinary Meeting (Almeria, Spain, 15-18 January 2008).

of the IMO, and are committed to take all appropriate actions towards the ratification of the BWM Convention for its entry into force as soon as possible.

The second strategic priority is to ***maintain capacity-building activities and initiatives in the Mediterranean region***. Moreover, REMPEC organized five regional capacity building activities and six national capacity building activities, and another follow up event is planned this year in 2014. It stresses the need to continue efforts made in the region to enhance capacity building, knowledge transfer and training of personnel after the GloBallast Partnership Project (please see later on this project in this document), and termination and to involve relevant international and regional co-operation mechanisms, non-governmental organizations, and agencies for the continuation of the process initiated.

The third strategic priority is to ***develop advanced knowledge on environmental conditions of the Mediterranean and ships' mediated introduction of invasive species*** by promoting individually, or through regional cooperation, research and development programmes in the field of invasive alien species and ships' ballast water management as a means to enhance knowledge and help setting scientific grounds on which best measures on controlling the transfer of invasive species can be based. The Contracting Parties also agree that results of such scientific work should be made available to all interested public.

The fourth strategic priority is the ***use of risk assessment as a reliable tool to assist in ballast water management decision-making and in compliance, monitoring, and enforcement procedures***. In this regard, the Contracting Parties consider risk assessments at a national, sub-regional or regional level as an appropriate tool to guide on ballast water management measures and are committed to establishing surveys and monitoring programmes including reporting and alert mechanisms.

The fifth strategic priority is to ***decide upon voluntary regional arrangements in the Mediterranean and ensure that sub-regional and national strategies are in line with these***. Interim voluntary arrangements for the Mediterranean are adopted and in force through IMO Circular Letter BWM.02/Circ.35 issued in August 2011. Under this priority, the Contracting Parties work collaboratively to adopt regional voluntary arrangements concerning ballast water management in the Mediterranean region in a manner consistent with the requirements and standards set in the BWM Convention.

The sixth strategic priority is to ***consider other regional seas strategies and initiatives*** such as the General Guidance on the Voluntary Interim application of the D1 Ballast Water Exchange Standard by Vessels Operating between the Mediterranean Sea and the North-East Atlantic and/or the Baltic Sea agreed to by the Barcelona Convention, OSPAR, and HELCOM. The Contracting Parties are committed to enhancing and maintaining cooperation with the neighbouring regions of the Mediterranean Sea and with other relevant regional agreements in order to ensure that the measures adopted are consistent with other ballast water management regional arrangement.

The seventh strategic priority is about ***keeping the Strategy and Action Plan under review and assesses the implementation progress***. Under this objective, the Contracting Parties call for regular meetings with the purpose of reviewing and evaluating the ongoing relevance of the Strategy and overall effectiveness of activities carried out under the Action Plan, and that the work accomplished in the various regional seas regarding the management of ballast water is on the agenda of meetings and forums.

The eighth strategic priority is to ***work on the identification of adequate resources to implement activities under the Strategy and Action Plan***. The Contracting Parties long-term objective here is to ensure the sustainability and continuity of activities from self-financing sources within the region.

In pursuance to the Regional Strategy on Ship's Ballast Water Management, the Action Plan describes 8 main measures to be taken at a regional level, sub-regional, or national level. In each of those actions, measures were agreed by the Contracting Parties to be undertaken.

The first action is on *the ratification of the BWM Convention* (ratified by 8 Contracting Parties as previously mentioned).

The second action is to *adopt harmonized arrangements for ballast water exchange in the Mediterranean region*.⁸¹ In this framework, the Contracting Parties are requested to adopt harmonized voluntary arrangements for ballast water exchange in the Mediterranean region. Furthermore, the Contracting Parties have to *notify all interested parties of the adoption of harmonized voluntary arrangements for ballast water exchange in the Mediterranean Sea through notices to shipping and instructions to surveyors*).

The third action is to establish a *solid Compliance, Monitoring and Enforcement (CME)* system in the Mediterranean region. In this framework, the Contracting Parties should adapt their existing Port State Control & CME systems to integrate the harmonized BWM CME procedures and to establish and maintain up to-date a regional communication system possibly within a clearing house mechanism (**CHM**), in order to allow exchange of experience and tracking of violations utilizing existing control.

The fourth action is to *establish a surveying, biological monitoring, and risk assessment system for Mediterranean ports*. In this framework, the Contracting Parties agree to develop a regionally standardized biological sampling and monitoring protocol to build the necessary biological and environmental databases and to support the IAS management objectives, to *collaborate on biological survey and monitoring activities, including to promote and ensure sharing of technical capacity, resources and results, to seek institutional support at the national level for the conducting of port biological surveys and plans for monitoring as part of their national strategy for ballast water and IAS management, and to adapt and use the regional CHM for sharing of data related to port surveys and ongoing biological monitoring (communication)*. In addition, a regional-level risk assessment should be produced as well as shipping movement and ballast water discharges databases.

Action five relates to the enhancement of expertise and facilitating knowledge transfer and capacity building in the Mediterranean region. In this framework, the Contracting Parties are requested to *investigate the possibility of including training programmes and other capacity-building activities* in the regular programme of work of the relevant Regional Activity Centres of UNEP/MAP, to disseminate protocols and tools for standardization of technical approaches that could be used to conduct regional and national activities, in countries with specific expertise on ballast water management related activities help organize national, sub-regional or regional training sessions, and finally to replicate such training on a national level through the establishment of a national training programme on ballast water management activities.

Action six is to *enhance public awareness on ships' ballast water and invasive alien species*. To this aim, the Contracting Parties should use IMO GloBallast Public awareness materials and translate these to local languages for dissemination at national level, carry out national seminars and workshops to raise awareness among the various stakeholders involved, and develop local case studies that may be used effectively for raising awareness and leveraging support within the Mediterranean region and its sub-region.

The seventh action is on *setting up a web-based Mediterranean mechanism for exchanging information*. The Contracting Parties agree to establish a web based Regional Information System, which is still under consideration.

Finally, Action eight is on the incorporation of the Action Plan evaluation within the Barcelona Convention reporting system and procedure. In this framework, the Contracting Parties mandate the REMPEC to coordinate and assist with the implementation of the Action Plan in the region, in

⁸¹ These harmonized arrangements were adopted and disseminated through an IMO Circular.

collaboration with the Regional Activity Centre for Specially Protected Areas (RAC/SPA) where relevant.

The Strategy and its Action Plan relate to the following EcAp Targets:

- The number of species and abundance of IAS introduced as a result of human activities is reduced;
- Improved management of the main human related pathways and vectors of NIS;
- Introduction (Mediterranean Strategy for the management of ballast waters, Aquaculture early warning systems, etc.);
- Action plans developed to address high risk NIS, should they appear in the Mediterranean;
- Abundance of NIS introduced by human activities reduced to levels giving no detectable impact.

1.2.3 GloBallast Partnerships Project in the Mediterranean Region

REMPEC (in liaison with RAC/SPA) is implementing in the Mediterranean region a GEF/ United Nations Development Programme (UNDP)/IMO Project entitled “Building partnerships to assist developing countries to reduce the transfer of harmful aquatic organisms in ship's ballast water” (GloBallast Partnerships). The Project replicates at a larger scale the first IMO-GEF-UNDP Project carried out between 2000 and 2004 in pilot countries on the issue of ships’ ballast water management, taking also into consideration further developments which occurred after its completion, notably the adoption in 2004 of BWM Convention.

The Project specifically is aimed at vulnerable developing States, with a view to assist them in implementing sustainable, risk-based mechanisms for the management and control of ships’ ballast water and sediments and subsequently minimizing the adverse impacts of aquatic invasive species transferred by ships.

Under the auspices of this ongoing project, REMPEC, in collaboration with RAC/SPA, coordinated and facilitated five regional capacity-building activities, six national training courses and workshops, and three Regional Task Force (RTF) Meetings within the GloBallast Partnerships Project. Moreover, another national Workshop is planned for last quarter of 2014.

In addition, different initiatives and projects were developed to fill gaps in knowledge about exotic species and to list invasive species, which are also important as a first step to mitigate their introduction. Existing and currently developing national, regional and international information networks and databases on indigenous and invasive species include the Mediterranean the Marine Mediterranean Invasive Alien Species (MAMIAS⁸²) database developed for RAC/SPA with information up to 2012 and the “**Andromeda**” invasive species database for the Mediterranean and Black Sea, currently being developed under the Policy-oriented marine Environmental Research for the Southern European Seas (PERSEUS)⁸³ Project, which is expected to be operational by end of 2014. The Mediterranean Science Commission (CIESM) also prepared an Atlas of exotic species with the participation of several of the region’s scientists. Four volumes of the Atlas have been produced (fishes, crustaceans, molluscs, and macrophyta).

While the MAMIAS has been an important Mediterranean initiative for a regional database, unfortunately, due to lack of funding, it does not operate efficiently.

Furthermore, the European Alien Species Information Network (EASIN⁸⁴), developed by the Joint Research Centre of the European Commission, facilitates the exploration of non-indigenous species

⁸²<http://www.mamias.org>

⁸³ <http://www.perseus-net.eu>

⁸⁴ <http://easin.jrc.ec.europa.eu/>

information in Europe (and the entire Mediterranean) from distributed resources through a network of interoperable web services, following internationally recognized standards and protocols.

The SAP/BIO Analysis also points out that some countries have undertaken additional initiatives at the national level to elaborate guidelines to mitigate introduction and spread of alien species.

1.2.4 Key Gaps identified by the Secretariat in relation to biodiversity and non-indigenous species

Based on the previous analyses on the biodiversity and non-indigenous species related measures, the Secretariat has identified the following gaps:

Common Regional Gaps

- < The CBD Aichi target of 10% protection of the seas is far from being achieved in the basin in terms of both coverage and management. Coverage figures vary, depending on sources and areas considered, between 4,56% and 5,26%;
- < common tools to implement the biodiversity related NAPs have not been developed yet, mainly because of the unavailability of financial resources;
- < due to lack of further adequate funding, the level of management of the Marine and Coastal Protected Areas is still insufficient;
- < analysis on monitoring global trade and economic policies and trends from a Mediterranean biodiversity perspective is missing;
- < Mediterranean biodiversity hot-spots maps reflecting threats other than pollution (including climate change) are missing;
- < the introduction of labels linked to sustainable tourism and ecotourism remains limited in the Mediterranean;
- < regardless of international efforts (including work of ACCOBAMS), the issue of noise at sea has not yet been given sufficient attention in the Mediterranean;
- < the widespread development of fish farming in the Mediterranean has not yet been accompanied in most of the countries by measures to control the harmful effects of this activity on the environment;
- < main biodiversity-related scientific gaps exist concerning the southern and eastern Mediterranean, the sizes and distribution of the populations of certain species (for example cetaceans), and the biodiversity of the deep sea areas;
- < lack of Master's and Doctoral grants in the field of taxonomy is resulting in a shortage of taxonomic expertise in the countries;
- < lack of financial resources regarding CHM, with dispersal of information on biodiversity between several administrations, research centres, and other actors presents the main gap;
- < there is a lack of coordination between the actors in the region that have biodiversity related awareness raising activities;
- < there is a need for further cooperation with other Regional Sea Conventions/Bodies in relation to biodiversity and NIS (on latter, in line with the Ballast Water Strategy's sixth strategic priority, but in relation to both);
- < while the MAMIAS has been an important Mediterranean initiative for a regional database for NIS, unfortunately it does not operate efficiently due to lack of funding;
- < further strengthening of public participation in environmental decision-making is needed;
- < for marine areas outside of national jurisdiction, processes of negotiation between states make the procedure very lengthy, hindering their establishment;
- < due to lack of further adequate funding, the level of management of the Marine and Coastal Protected Areas is still insufficient;

Common National Gaps

- ◁ implementing measures on biodiversity protection are often lacking, regardless of the various guidelines and tools developed by different regional bodies in addition to UNEP/MAP, such as RAC/SPA, ACCOBAMS, and GFCM;
- ◁ while majority of the Mediterranean countries developed NAPs to implement the SAP/BIO and the provisions analysed above, unfortunately the majority of the NAPs have not been implemented due to the lack of funding;
- ◁ national implementation of the Action Plan and Guidelines on Non-Indigenous/Invasive Species is lacking in most of the countries;
- ◁ for marine areas outside of national jurisdiction, processes of negotiation between states make the procedure very lengthy, hindering their establishment;
- ◁ due to lack of further adequate funding, the level of management of the Marine and Coastal Protected Areas is still insufficient;
- ◁ regarding measures concerning the checking of imports and exports of endangered species, the enforcement is lacking in many cases (lack of training for the agents of the checking authorities at ports, airports, and other border crossing points was identified)
- ◁ ties at ports, airports, and other border crossing points was identified as a main gap;

Priority Gaps and Recommendations

Key priority gaps that have been identified include:

- ◁ Biodiversity conservation assessment tools (in-depth thematic assessment, maps, and indicator fact sheets) need to be developed and updated to show trends at national, sub-regional, and regional levels and to measure the effectiveness of the SAP BIO NAPs and Regional Action Plans implementation;
- ◁ Implementing measures on biodiversity protection are often lacking regarding various guidelines and tools developed by different regional bodies in addition to UNEP/MAP, such as RAC/SPA, ACCOBAMS, and GFCM;
- ◁ Science-policy interface needs to be strengthened, ensuring that results of scientific projects in the Mediterranean benefit the EcAp process;
- ◁ Public participation in environmental decision-making is insufficient and requires further strengthening;
- ◁ Funding for MAMIAS is lacking and inadequate

Key recommendations of the Secretariat to address the priority gaps are:

- ◁ Strengthen implementation of SAP/BIO and Biodiversity related Action Plans by a more detailed evaluation of the SAP/BIO implementation and by the creation of new biodiversity related NAPs in line with the EcAp targets and support their national implementation;
- ◁ encourage the establishment of more MPAs and SPAMIs, noting that the list of EBSAs constitute a scientific starting point for further attention of the Contracting Parties describing ecologically or biologically significant areas in the Mediterranean;
- ◁ strengthen management of the MPAs and SPAMIs network
- ◁ strengthen cooperation with other regional players, in line with the Aichi target and maritime spatial planning needs
- ◁ undertake capacity-building activities based on specific country needs
- ◁ further update MAMIAS and strengthen country level implementation of the Strategy and of the Action Plan, in line with the two guidance documents;
- ◁ strengthen science-policy interface and public participation

2. Pollution Assessment and Control and Marine Litter

Marine pollution has been the initial focus of UNEP/MAP since its establishment, with the 1976 Barcelona Convention to protect the Mediterranean sea against pollution and its specific Protocols (Dumping Protocol, Prevention and Emergency Protocol, Land-based Sources and Activities Protocol, Offshore Protocol, Hazardous Wastes Protocol), as well as various other measures aiming to implement the relevant parts of the Convention and the Protocols (Regional Plans, Strategies, NAPs) and aiming for elimination/and controlling/reducing pollution in the Mediterranean coast and sea.

MED POL Programme is the operational arm of UNEP/MAP to assess and control marine pollution from land based sources of pollution. It is responsible for the follow up work related to the implementation of the pollution-related part of the Barcelona Convention and of its relevant Protocols, including pollution control measures, the drafting of action plans, and the assisting of Contracting Parties in order to eliminate pollution from land-based sources.

2.1 SAP/MED⁸⁵

The Strategic Action Programme to Address Pollution from Land-Based Activities in the Mediterranean Region (**SAP/MED**) is an action-oriented regional strategy that identifies priority target categories of polluting substances and activities to be eliminated or controlled by the Mediterranean countries through a planned timetable (up to the year 2025) in line with concrete obligations of the LBS Protocol. The SAP/MED was developed with support from GEF and adopted by the Contracting Parties in 1997.

Moreover, this regional strategic programme is focusing on implementing integrated pollution prevention and reduction programmes of measures based on EcAp and LBS, Dumping, and Hazardous Waste Protocols with the view to achieve good environmental status targets agreed by COP 18 on EO 5, 9 and 10. Indeed, even though mainly targeting pollution, the SAP/MED can be seen as the first regional strategy of UNEP/MAP, building on a horizontal approach (based on the Transboundary Diagnostic Analysis and on the concept of large marine ecosystems).

The SAP/MED is composed of the following components:

- regional activities to be implemented by the Secretariat under the guidance of MED POL Focal Points (technical guidelines, capacity building workshops, tools supporting monitoring, enforcement, reporting, and public participation);
- 33 regional pollution reduction targets covering a considerable number of substances and sectors in accordance with the LBS Protocol, including urban environment (municipal sewage, solid waste and air pollution);
- a requirement to develop NAPs in accordance with Article 5 of the LBS Protocol, with the view to break down SAP/MED requirements into national and local actions and to identify priority policy, legal, institutional and pollution reduction measures; and a requirement to report on SAP and NAP implementation on a periodical basis (i.e. every five years) and a reporting of NAP implementation effectiveness in accordance with Article 13 of the LBS Protocol every two years.

SAP/MED targets:

1. Phase out inputs of 9 pesticides and PCBs by 2010 (Aldrine, DDT, Dieldrine, Endrine, Chlordane, Heptachlor, Mirex, Toxaphene, PCB/PCT);
2. Reduce by 50% inputs of BOD by 2010;

⁸⁵ Mid-term evaluation of SAP/MED implementations was carried out in 2013

3. Phase out inputs of 9 pesticides and PCBs and reduce to the fullest possible extent hexachloro benzene, dioxins and furans by 2010 (Hexachlorobenzene);
4. Reduce to the fullest possible extent hexachloro benzene, dioxins and furans by 2010;
5. Phase out to the fullest possible extent inputs of PAHs by 2010;
6. Phase out to the fullest possible extent discharges and emissions and losses of heavy metals (mercury, cadmium, and lead) by 2025;
7. Phase out to the fullest possible extent discharges and emissions and losses of heavy metals (mercury, cadmium and lead) by 2025;
8. Phase out to the fullest possible extent discharges and emissions and losses of organotin compounds by 2010 (Butyltin compounds);
9. Reduce discharges, emissions, and losses of zinc, copper and chrome by 2010 ;
10. Reduce discharges, emissions, and losses into the Mediterranean sea by 2010 (Alpha hexachlorocyclohexane, beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, Pentachlorobenzene, Perfluorooctane sulfonyl fluoride, Perfluorooctane sulfonic acid, its salts, Endosulfan, Lindane, Pentabromodiphenyl ether, Tetrabromodiphenyl ether, Heptabromodiphenyl ether).

SAP/MED relates to the following EcAp Targets list:

- < Reference nutrients concentrations according to the local hydrological, chemical, and morphological characteristics of the impacted marine region;
- < Decreasing trend of nutrients concentrations in water column of human impacted areas statistically defined;
- < Reduction of BOD emissions from land based sources;
- < Reduction of nutrients emissions from land based sources;
- < Chl-a concentration in high-risk areas below thresholds;
- < Decreasing trend in chl-a concentrations in high risk areas affected by human activities;
- < Index of turbidity behind threshold in high risk areas;
- < Increasing trend of transparency in areas impacted by human activities;
- < Dissolved oxygen concentrations in high-risk areas above local threshold;
- < Increasing trend in dissolved oxygen concentrations in areas impacted by human activities;
- < Concentrations of specific contaminants below EACs or below reference concentrations;
- < No deterioration trend in contaminants;
- < Reduction of contaminants emissions from land based sources;
- < Contaminants effects below threshold;
- < Decreasing trend in the operational releases of oil and other contaminants from coastal, maritime, and off-shore activities;
- < Decreasing trend in the occurrences of acute pollution events;
- < Concentrations of contaminants are within the regulatory limits set by legislation;
- < Decreasing trend in the frequency of cases of seafood samples above regulatory limits for contaminants;
- < Increasing trend in the percentage of intestinal enterococci concentration measurements within established standards;
- < Decreasing trend in the number/amount of marine litter (items) deposited on the coast;
- < Decreasing trend in the number/amount of marine litter items in the water surface and the seafloor;

- ◁ Decreasing trend in the cases of entanglement or/and a decreasing trend in the stomach content of the sentinel species.

2.2 SAP/MED triggered national and regional measures on a range of contaminants and sectors contributing to marine pollution

After its adoption, SAP/MED, with support from GEF, countries, have prepared an inventory and have quantified all pollution sources on the coast as well as a National Diagnostic Analyses indicating priority issues. The major deliverables were the 21 LBS NAPs to address land-based pollution, and endorsed by the Contracting Parties in 2005.

2.2.1 The NAPs⁸⁶

All the Contracting Parties adopted in 2003-2005 NAPs in order to implement SAP/MED in the framework of LBS Protocol. These NAPs describe the planned policies and actions that each country intends to undertake to reduce pollution in line with SAP targets. Furthermore, they incorporate mechanisms for information exchange, technology transfer, and promotion of cleaner technology, public participation, and sustainable financing. Indeed, their fundamental goal is to develop and implement concrete pollution reduction projects that (1) mobilize both stakeholders and resources, (2) become a cyclical process on which to build upon, (3) are mainstreamed into relevant institutional, budgetary and policy framework and (4) incorporate lessons learnt in the process.

At COP 18, the Contracting Parties to the Barcelona Convention committed to update their National Action Plans (NAPs) adopted under the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (the LBS Protocol) and its Strategic Programme (SAP-MED). The main objective of the NAP update is to identify and prioritize national programmes of measures to achieve Good Environmental Status (GES) with regard to pollution-related EcAp objectives in the framework of the LBS Protocol and related Regional Plans. The process was initiated in 2014 and is planned for completion by the end of 2015, with submission of the updated NAPs to COP 19.

In cooperation with the Contracting Parties, the Secretariat developed NAP update Guidelines to ensure harmonized approaches, mainstreaming of the ecosystem approach, and implementation of pertinent GES objectives, as well as implementation of new commitments deriving from the 11 legally binding measures/Regional Plans that have been adopted in the framework of the LBS Protocol since 2009. The Guidelines describe the required institutional set up, implementation timetable, involvement of stakeholders, synergies with other policy frameworks, methodological aspects, and core pollution prevention and reduction commitments.

In terms of proposed methodologies, the Guidelines describe a sequence of steps to be performed – from the assessment of midterm benchmark/current situation (including policy and institutional frameworks, ongoing projects, and state of the environment based on the DPSIR framework) to identification of gaps in relation to GES, SAP-MED, and Regional Plans' requirements, setting of operational objectives to bridge the gaps, and identification and prioritisation of measures. Specific technical annexes of the Guidelines detail, *inter alia*, proposed approaches for calculation of national loads of pollutants discharged within the hydrological basin of the Mediterranean Sea and criteria to assess the status of hot spots/sensitive areas. Furthermore, a set of indicators to measure SAP-MED/NAP implementation is included. The Guidelines also cover possible use of tools such as cost-effectiveness and cost-benefit analysis in the final selection of NAP measures, with the aim to channel limited resources to the most effective/beneficial actions (in terms of environmental as well as economic and social improvements).

Other activities carried out by the Secretariat in support of the NAP update include the provision of necessary technical assistance on the regional level to help with implementation of the Guidelines, the

⁸⁶ Mid-term evaluation of SAP/MED implementation of NAPs was carried out in 2013

mobilization of resources, and the provision of assistance for technical and organizational aspects of the process at national level.

As of June 2015, the progress in implementing NAP update can be summarised as follows:

- ◁ Development of adequate methodologies to mainstream the ecosystem approach and to meet requirements of the evolving Barcelona Convention legal and policy framework has been completed.
- ◁ Necessary institutional structures have been established, and NAP update teams have been mobilized in all the countries. Assessment of midterm benchmark as the first step in drafting the updated NAPs is underway or has been completed in majority of the countries.
- ◁ Opportunities have been provided for NAP update teams to gain hands-on experiences with applying the recommended methodologies through a regional meeting (held in May 2015 in Athens) and country missions.
- ◁ Appropriate approaches were identified and operational advice was provided on how to underpin the NAP update with economic analysis in order to improve financial sustainability and implementation prospects of the NAPs.
- ◁ Additional funding was mobilised, most notably through UfM H2020 Initiative, to support technical and process-related components of the NAP update.
- ◁ Synergies with other policy frameworks and comparable projects were strengthened.

Next to the above developments, Contracting Parties also agreed to address further specific needs in priority areas, resulting in various legally binding regional measures, i.e. Regional Action Plans, as seen below (with majority of them adopted at COP17 in 2012 and the latest adopted recently during COP18 on marine litter).

Regional Plan on the reduction of inputs of Mercury in the framework of the implementation of Article 15 of the LBS Protocol

At COP17, the Contracting Parties, acknowledging the widespread concerns over the serious adverse effects of mercury on human health and on the environment, adopted the Regional Plan on the reduction of Mercury in the framework of the implementation of the Article 15 of the LBS Protocol.

This Regional Plan is divided in two parts differentiating between measures related to Chlor alkali industry and non Chlor alkali industry. In this framework, Contracting Parties shall prohibit the installation of new Chlor alkali plants using mercury cells with immediate effect and of vinyl chloride monomer production plants using mercury as a catalyst with immediate effect and also provides that the releases of mercury from activity of Chlor alkali plants must cease by 2020 at the latest.

The Parties are also in demand to reduce the total releases of mercury until their final cessation with the view not to exceed 1.0g per metric ton of installed chlorine production capacity in each plant. For the non Chlor alkali industry, the Parties shall adopt by 2015 and 2019 National ELVs for mercury emissions from other than Chlor alkali industry.

In addition, Parties under this Regional Plan have to take the appropriate measures to reduce the inputs of Mercury emission from other sectors and use alternatives as appropriate, and also take the appropriate measures to isolate and contain the mercury containing wastes to avoid potential contamination of air, soil and water. The Parties are also obliged to take measures to improve the traceability of pollution by identifying existing sites which have been historically contaminated with mercury.

This Regional Plan relate to achievement of the following EcAp Targets:

- Concentration of specific contaminants below Environment Assessment Criteria (**EACs**) or below reference concentrations;
- No deterioration trend in contaminants concentrations in sediment and biota from human impacted areas, statistically defined;
- Reduction of contaminants from land-based sources;
- Contaminants effects below threshold;
- Concentrations of contaminants are within the regulatory limits set by legislation.

Regional Plan on the reduction of BOD5 in the food sector (adopted in 2012)At COP 17, the Contracting Parties considered that BOD5 is an element contributing to nutrients enrichment in coastal areas of the Mediterranean, thus playing a role in tackling the eutrophication phenomena, taking into account the special hydrographical and ecological characteristics of the Mediterranean Sea area as a semi closed sea. This recalls the ecological objective 5 on eutrophication and its related EcAp Targets. In this regard, the Contracting Parties adopted this present Regional Plan in order to prevent pollution and to protect the coastal and marine environment from the adverse effects of discharges of organic load (BOD5) from food sectors.

Within this Regional Plan, Contracting Parties are requested to reduce pollution by the application of Best available Techniques (**BEP**) and Best Available Technologies (**BAT**) instruments as well as the establishment of an Emission Limit Value (**ELV**).

It is also stated that all Parties shall ensure that their competent authorities or appropriate bodies shall monitor related discharges into water to verify compliance with the requirements related to the ELV.

This Regional Plan addresses the following EcAp Targets:

- No deterioration trend in contaminants;
- Reduction of contaminants from land-based sources;
- Contaminants effects below threshold;
- Reference nutrients concentrations according to the local hydrological, chemical, and morphological characteristics of the non-impacted marine region;
- Decreasing trend of nutrients concentrations in water column of human impacted areas statistically defined;
- Reduction of BOD emissions from land based sources;
- Reduction of nutrients emissions from land based sources;
- Chl-a concentrations in high-risk areas below threshold;
- Decreasing trend in chl-a concentrations in high risk areas affected by human activities;
- Increasing trend of transparency in areas impacted by human activities;
- Dissolved oxygen concentrations in high-risk areas above local threshold;
- Increasing trend in dissolved oxygen concentrations in areas impacted by human activities.

Regional Plan on the phasing out of Hexabromodiphenyl ether, Heptabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenyl ether in the framework of the implementation of Article 15 of the LBS Protocol

At COP 17, the Contracting Parties decided to adopt in the framework of the implementation of Article 15 of the LBS Protocol this Regional Plan, laying out measures to prohibit and/or take legal and administrative measures necessary to eliminate the production of specific toxic substances and the import or export of them. In this framework, the Contracting Parties are also requested to take appropriate measures so that the above mentioned chemicals are handled, collected, transported, and stored in an environmentally sound manner or disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed so that they do not exhibit the characteristics

of persistent organic pollutants or otherwise disposed of in an environmentally sound manner when destruction or irreversible transformation does not represent the environmentally preferable option or the persistent organic content is low. Contracting Parties shall also ensure that the competent authorities or appropriate bodies monitor the implementation of the measures.

This Regional Plan relate to the achievement of the following EcAp Targets:

- Concentration of specific contaminants below EACs or below reference concentrations;
- No deterioration trend in contaminants;
- Reduction of contaminants from land-based sources;
- Contaminants effects below threshold.

Regional Plan on the on the phasing out of lindane and endosulfane in the framework of the implementation of Article 15 of the LBS Protocol

At COP 17, the Contracting Parties decided to adopt in the framework of the implementation of Article 15 of the LBS Protocol this Regional Plan.

In this Regional Plan, the Parties are requested to prohibit and/or take legal and administrative measures necessary to eliminate the production as well as the import and export of LINDANE and ENDOSULFANE. Furthermore, the Parties have to take the necessary measures required so that LINDANE and ENDOSULFAN waste, including products and articles upon becoming wastes are (1) handled, collected, transported and stored in an environmentally sound manner, (2) disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed so that they do not exhibit the characteristics of persistent organic pollutants or otherwise disposed of in an environmentally sound manner when destruction or irreversible transformation does not represent the environmentally preferable option or the persistent organic pollutant content is low, taking into account international rules, standards, and guidelines and relevant global and regional regimes governing the management of hazardous wastes, (3) not permitted to be subjected to disposal operations that may lead to recovery, recycling, reclamation, direct reuse, or alternative uses of persistent organic pollutants, and (4) not transported across international boundaries without taking into account relevant international rules, standards, and guidelines.

Moreover, the Contracting Parties are requested to apply the BEPs for environmentally sound management of LINDANE and ENDOSULFAN. Ultimately, the Contracting Parties should ensure that their competent authorities or appropriate bodies monitor the implementation of the measures.

This Regional Plan relate to the following EcAp Targets:

- Concentration of specific contaminants below EACs or below reference concentrations;
- No deterioration trend in contaminants;
- Reduction of contaminants from land-based sources;
- Contaminants effects below threshold.

Regional Plan on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride in the framework of the implementation of Article 15 of the LBS Protocol

At COP 17, the Contracting Parties decided to adopt in the framework of the implementation of Article 15 of the LBS Protocol this Regional Plan.

The Parties are requested to prohibit and/or take legal and administrative measures to eliminate the production and import and export of the above mentioned chemicals. The chemicals should also be disposed in such as way that the persistent organic pollutant content is destroyed or irreversibly transformed so that they do not exhibit the characteristics of persistent organic pollutants or otherwise

disposed of in an environmentally sound manner when destruction or irreversible transformation does not represent the environmentally preferable option or the persistent organic pollutant content is low, taking into account international rules, standards, and guidelines, and relevant global and regional regimes governing the management of hazardous wastes. Parties shall also ensure that their competent authorities or appropriate bodies monitor the implementation of the measures.

This Regional Plan relates to the achievement of the following EcAp Targets:

- Concentration of specific contaminants below EACs or below reference concentrations;
- No deterioration trend in contaminants concentrations in sediment and biota from human impacted areas, statistically defined;
- Reduction of contaminants from land-based sources;
- Contaminants effects below threshold.

Regional Plan on the elimination of Alpha hexachlorocyclohexane, Betahexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene in the framework of the implementation of Article 15 of the LBS Protocol

At COP 17, the Contracting Parties decided to adopt in the framework of the implementation of Article 15 of the LBS Protocol this Regional Plan.

In this Regional Plan, Contracting Parties are requested to prohibit and/or take legal and administrative measures necessary to eliminate the production as well as the import and export of the chemicals above mentioned. The Regional Plan also states that the Parties shall ensure that any export or import of the chemicals above mentioned is done for their environmentally sound disposal and for a use or a purpose which is done in accordance with the relevant international rules, standards, and regulations. The Regional Plan further specifies that all Parties should take the necessary measures so that the wastes are handled, collected, transported, and stored in an environmentally sound manner, disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed, and not transported across international boundaries without taking into account relevant international rules, standards, and guidelines. It also requests the Contracting Parties to apply BAT and BEPs for environmentally sound management of the chemicals above mentioned and also requests for them to ensure that competent authorities shall monitor the implementation of the measures.

This Regional Plan relate to the achievement of the following EcAp Targets:

- Concentration of specific contaminants below EACs or below reference concentrations;
- No deterioration trend in contaminants;
- Reduction of contaminants from land-based sources;
- Contaminants effects below threshold.

Regional Plan on the Phasing Out of DDT in the framework of the implementation of Article 15 of the LBS Protocol

At COP 16, the Contracting Parties, recognizing that DDT is a persistent organic pollutant that possesses toxic properties, resists degradation, bioaccumulates, and is transported widely and conscious of the need of developing regional regulatory measures, adopted the Regional Plan on the phasing out of DDT in the framework of the implementation of Article 15 of the LBS Protocol.

In line with the Regional Plan, Contracting Parties should take measures in order to eliminate the production and use of DDT, the import and export of DDT, and its wastes. Parties shall ensure that the management and destruction of DDT stockpiles and waste containing this chemical will be carried out with appropriate equipment, with precautions to avoid accidents and spillage, and by specialized

personnel in an environmentally sound manner making use of BEPs. Parties shall also ensure that their competent authorities of appropriate bodies monitor the implementation of the measures.

This Regional Plan relates to the achievement of the following EcAp Targets:

- Concentration of specific contaminants below EACs or below reference concentrations;
- No deterioration trend in contaminants;
- Reduction of contaminants from land-based sources;
- Contaminants effects below threshold.

Regional Plan on the reduction of BOD5 from urban waste water in the framework of the implementation of Article 15 of the LBS ProtocolAt COP 16, the Contracting Parties adopted this regional action plan in 2009 addressing all the releases within the hydrological basin discharging directly or indirectly into the Mediterranean Sea. The objective of this Regional Plan is to protect the coastal and marine environment and health from the adverse effects of the abovementioned waste water through direct and or indirect discharges, in particular regarding adverse effects on the oxygen content of the coastal and marine environment and eutrophication phenomena.

Article 3 of this Regional Plan focuses on the measures, stating that Parties shall ensure that all agglomerations collect and treat their urban waste waters before discharging them into the environment. Under this Article, the Parties shall adopt National implementation plan in the course of BOD5 ELV for urban waste waters. The Parties shall also ensure that their competent authorities or appropriate bodies shall monitor discharges from municipal wastewater treatment plant.

This Regional Plan relates to the achievement of the following EcAp Targets:

- Reference nutrients concentrations according to the local hydrological, chemical, and morphological characteristics of the non-impacted marine region;
- Decreasing trend of nutrients concentrations in water column of human impacted areas statistically defined;
- Reduction of BOD emissions from land based sources;
- Reduction of nutrients emissions from land based sources;
- Chl-a concentrations in high-risk areas below thresholds;
- Decreasing trend in chl-a concentrations in high risk areas affected by human activities;
- Index of turbidity behind threshold in high risk areas;
- Increasing trend of transparency in areas impacted by human activities;
- Dissolved oxygen concentrations in high-risk areas above local threshold;
- Increasing trend in dissolved oxygen concentrations in areas impacted by human activities.

Regional Plan on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene in the framework of the implementation of Article 15 of the LBS Protocol

At COP 17, the Contracting Parties, conscious of the need of developing regional regulatory measures for hazardous pesticides in close cooperation with other relevant international environmental agreements and recognizing the special hydrological and ecological characteristics of the Mediterranean Sea Area, adopted the Regional Plan on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Towaphene in the framework of the implementation of the Article 15 of the LBS Protocol during COP17.

Article II Measures of the Regional Plan as ask for Parties to prohibit and/or take legal and administrative measures necessary to eliminate the production and use of chemicals and the import and export of chemicals. Furthermore, it is mentioned that the Parties should take appropriate measures so that such wastes are handled, collected, transported, and stored in an environmentally

sound manner. The Regional Plan also explicitly states that Parties shall ensure that their competent authorities or appropriate bodies monitor the implementation of the measures. The measures provided for under this Regional Plan contribute to the achievement of the following EcAp Targets:

- Concentration of specific contaminants below EACs or below reference concentrations;
- No deterioration trend in contaminants;
- Reduction of contaminants from land-based sources;
- Contaminants are below threshold.

Regional Strategy for Prevention of and response to marine pollution from Ships

The Regional Strategy for prevention of and response to marine pollution from ships as laid out in UNEP/MED IG. 16/10 was adopted at the COP14, with REMPEC being responsible for the implementation of the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea by *inter alia* the following regional measures:

- (1) Strengthening the capacities of the coastal States in the Mediterranean region;
- (2) Developing regional co-operation;
- (3) Assisting coastal States of the Mediterranean, which so request; and
- (4) Providing a framework for exchange of information. In this framework, the objectives in order to make sure the REMPEC fulfil its responsibilities.

This Strategy requests the Contracting Parties to enhance, on the basis on a national plans, the performance of their maritime administrations in accordance with the relative IMO recommendations and guidelines by 2010 and to carry out, at regular interval, a self-assessment of their capabilities and performance in giving full and complete effect to the International Convention for the Prevention of Pollution from Ships (**MARPOL**) by using the guidance set out in the relevant IMO Resolution. Point 4.3 is on strengthening the Memorandum of Understanding (**MoU**) on Port State Control (**PSC**) in the Mediterranean region (**Mediterranean MoU**).

Even though many Mediterranean States have ratified MARPOL, not all countries have yet established a national legal framework to effectively implement the convention. Furthermore, in some countries, there is a need to raise the level of awareness among government officials as to the importance of this issue if illegal discharges from ships are to be tackled seriously.

For this reason, the Contracting Parties are requested to ensure the existence of a national legal framework as a basis for prosecuting discharges offenders to infringements of the MARPOL Convention endeavour to adopt common rules and harmonize sanctions by 2015 with a view to ensuring even-handed treatment of discharge offenders throughout the Mediterranean region.

Furthermore, the Contracting Parties are requested to share collected data and facilitate acceptance of the evidence gathered by other States, in order to ensure the successful prosecution of discharge offenders and are also requested to establish areas under the jurisdiction of the States enabling the implementation of MARPOL Convention in term of prosecution of offenders, developed on a regional or sub-regional basis, in a coordinated way that is also in compliance with international law as defined by the United Nations Convention on the Law of the Sea.

In light of the increase of pollution generated by pleasure craft activities, the Contracting Parties were asked to prepare guidelines on the prevention of pollution from pleasure craft activities in the Mediterranean and were requested to identify the areas of the Mediterranean where control of maritime traffic could be improved by the establishment of regime based on the use of Automatic identification System (**AIS**) and to improve technical cooperation among Vessel Traffic Services (**VTS**) Centres of the neighbouring countries according to the need, and to exchange information about ships AIS system in the common surveillance area. The identification of Particularly Sensitive Sea

Areas (**PSSAs**) as well as the drawing of plans to deal with ships in distress and to define the modalities of the response according to its nature and the risk occurred is also a requirement.

Another important requirement of the Strategy is to ensure that adequate emergency towing capacity is available throughout the Mediterranean to assist vessels, including tankers, in distress. In this framework, the Contracting Parties were requested to adopt by 2011 Mediterranean guidelines on emergency towing including, if appropriate, agreements on sharing towing capacity between neighbouring States.

Regarding prevention of accidents in commercial ports and oil terminals, it is said that the majority of pollution incidents occur in port areas and oil terminals. In this regard, the Contracting Parties agreed to prepare and adopt by 2015 a comprehensive Marine Pollution Safety Management System for use in commercial ports and oil terminals comprising procedures, personnel training, and equipment requirements. In addition, the Contracting Parties are requested to enhance the levels of pre-positioned spill response equipment under the direct control of Mediterranean States by providing to REMPEC.

The Contracting Parties also agreed to encourage research and development and science-policy interface to increase the level of knowledge in the field of preparedness and response to accidental marine pollution by oil and other harmful substances by establishing national training programmes for response to incidents involving oil and other HNS with a view to continuous education of such personnel.

The Strategy request to facilitate international cooperation and mutual assistance within the framework of the Prevention and Emergency Protocol aims to strengthen the capacity of individual coastal states to respond efficiently to marine pollution incidents through development of sub-regional operational agreements and contingency plans. For this purpose, the Contracting Parties agreed to prepare national contingency plans and establishing national systems for preparedness and response by 2008 with a view to creating necessary conditions for development of sub-regional agreements.

This Plan relates to the following EcAp Targets:

- Decrease trend in the occurrences of acute pollution events;
- Decreasing trend in the operational releases of oil and other contaminants from coastal, maritime and off-shore activities;
- The number of species and abundance of IAS introduced as a result of human activities is reduced;
- Improved management of the main human related pathways and vectors of NIS introduction (Mediterranean Strategy for the management of ballast waters, Aquaculture early warning systems, etc.);
- Action plans developed to address high risk NIS, should they appear in the Mediterranean;
- Abundance of NIS introduced by human activities reduced to levels giving no detectable impact;
- Impacts of NIS reduced to the feasible minimum; and
- Contaminants effects below threshold.

Pollution related to Offshore Activities: The Draft Action Plan

At COP18, for the purpose of facilitating the implementation of the Offshore Protocol, a need to prepare the Offshore Protocol Action Plan was officially expressed in Decision IG. 20/12. For this purpose, the Contracting Parties requested to the Secretariat in collaboration with an ad hoc Working Group to continue the necessary work with a view to achieve the drafting of the Offshore Action Plan by the end of 2014. The Ad hoc Working Group discussed the first draft of the Offshore Action Plan in June 2014⁸⁷ and the next discussion on the draft is to take place during the October 2014 EcAp Coordination Group.

⁸⁷ 3rd Offshore Protocol Working Group Meeting, Attard, Malta 17-18 June 2014

The draft Offshore Action Plan foresees the following priority actions (measures) to be undertaken by the Contracting Parties (with further specific measures under these overall measures/objectives to be achieved):

- ◁ Specific objective 1: To ratify the Offshore Protocol⁸⁸;
- ◁ Specific objective 2: To designate Contracting Parties' Representatives to participate to the regional governing bodies;
- ◁ Specific objective 3: To establish a technical cooperation and capacity building programme;
- ◁ Specific objective 4: To establish a financial mechanism for the implementation of the Action Plan ;
- ◁ Specific objective 5: To promote access to information and public participation in decision-making ;
- ◁ Specific objective 6: To enhance the regional transfer of technology;
- ◁ Specific objective 7: To develop and adopt regional offshore standards ;
- ◁ Specific objective 8: To develop and adopt regional offshore guidelines;
- ◁ Specific objective 9: To establish regional offshore monitoring procedures and programmes (this does not constitute to be a measure under the EcAp measures gap-analysis);
- ◁ Specific objective 10: To report on the implementation of the Action Plan.

The key recommendations of this ad-hoc working group are as follows (relevant also in relation to developing future measures in this area)⁸⁹:

- ◁ Regulate the discharge and disposal of machinery oil, the treatment and discharge of sewage, the disposal and discharge of garbage, the reception facilities, and the ship storage according to the requirements listed under the relevant MARPOL Convention Annexes, in order to regulate the transportation to shore in conformity with the international regulations on ship construction and navigation and to apply requirements for the loading of ships offshore in conformity with the requirements for the loading of ships in shoreline installations;
- ◁ Mandate the UNEP/MAP Working Group of Legal and Technical Experts established by the Contracting Parties to facilitate and assess the implementation of the Guidelines on Liability and Compensation for Damage Resulting from Pollution of the Marine Environment in the Mediterranean Sea Area, in order to assess the adequacy of the said Liability and Compensation Guidelines to Offshore activities, taking into consideration relevant global developments;
- ◁ Mandate a correspondence group composed of the seven (7) Contracting Parties to the Protocol, with the support of Contracting Parties to the Barcelona Convention which haven't yet ratified the Protocol, to propose amendments to the Protocol, which are to be adopted by at least three-fourths of the Parties (i.e. 6 Parties);
- ◁ Ensure that the offshore monitoring programme will be based on the principles and methodologies of the Integrated Monitoring and Assessment Programme under the Ecosystem Approach, while taking into account practices of other regions; and
- ◁ Ensure that the appropriate UNEP/MAP Component governance structure is defined and approved by the Contracting Parties to support the implementation of the Offshore Protocol and its Offshore Action Plan.

⁸⁸ Please see Annex X on the ratification status of the Offshore Protocol

⁸⁹ UNEP (DEPI)/MED IG. 21/5

Moreover the draft Offshore Action Plan also includes a draft Terms of Reference for the Barcelona Convention Offshore Oil and Gas Group (**BARCO OFOG**), presenting tasks that should be fulfilled by the Contracting Parties under support of the OFOG Group. These tasks include the following:

- a. identifying priorities for preparation of guidance documents, standards, and best practices in the oil and gas sector;
- b. preparing, or initiating and overseeing the preparation of, guidelines on the industry best practices;
- c. in the interest of sharing experience, facilitating rapid information exchange between national authorities through the appropriate information mechanism, regarding e.g. the occurrence and causes of and responses to major incidents and events which could have led to major accidents;
- d. promoting and facilitating consensus between national authorities regarding the best regulatory practice;
- e. exchanging information regarding the application of national legislation and policies relevant to offshore oil and gas activities and assisting the Secretariat in monitoring the implementation of the Offshore Protocol;
- f. developing and applying common standards as per article 10 of the Protocol;
- g. keeping under review the technical content of the annexes to the protocol and making relevant recommendations;
- h. preparing draft measures to control the use of chemicals, oil, and any other substances or sources of pollution and developing appropriate guidelines for monitoring and assessment, paying particular attention to ensure consistency with other related monitoring policies adopted by the Contracting Parties;
- i. assisting in defining appropriate relevant targets for Offshore activities within the implementation of the Ecosystem Approach to UNEP/MAP policies and strategies.

This Action Plan relates to the following EcAp Targets:

- Decreasing trend in the operational releases of oil and other contaminants from coastal, maritime and off-shore activities;
- Decreasing trend in the occurrences of acute pollution events;
- Anthropogenic impacts which may alter ecosystems' adaptive capacity are reduced;
- Marine and shore based new structures planned, constructed and operated in a way to maintain the natural wave and current pattern as much as possible;
- Planning of new structures takes into account all possible mitigation measures in order to minimize the impact on coastal and marine ecosystem and its services integrity and historic assets. Where possible, promote ecosystem health;
- Site specific tolerable limits of key species in immediate proximity of seawater intake and outlet structures are considered while planning, constructing, and operating such structure.

Other regional measures:

- ◁ In addition to the above, the NAPs became a driving force for the Union for the Mediterranean's (**UfM**) initiative "**Horizon 2020**", with the objectives and targets of reducing and eliminating land-based pollution by the year 2020, which was formally launched in close cooperation with UNEP/MAP in 2005.
- ◁ The "Horizon 2020 Initiative" aims to de-pollute the Mediterranean by the year 2020 by tackling the sources of pollution that account for around 80% of the overall pollution of the Mediterranean Sea: municipal waste, urban waste water and industrial pollution.
- ◁ As such it supports the implementation of the commitments undertaken in the framework of the Barcelona Convention in relation to pollution. In addition to using EU policy tools it

cooperates and tries to coordinate and synergise with all other relevant programmes and projects, including the **MedPartnership**.

- ◁ The second component of **MedPartnership** focuses on pollution from land based activities, including Persistent Organic Pollutants and the implementation of SAP/MED and related NAPs. The first action under this component aims the facilitation of policy and legislation reforms for pollution control with some industrial pollution pilot project by MED POL. The project first objective is to increase capacity of basin countries to implement policies and strategies that address SAP/MED and the NAPs priorities. In this framework, the end-of-project target is to have 10 national policy documents drafted by the end of 2014 and in the process of adoption approval by spring 2015. In addition, 8 NAP priorities in participating countries, implementation should be initiated as a result of project activities and pilot projects, and monitored through Barcelona Convention mechanisms.

Specific activities and achievements of this MedPartnership project/component include:

- ◁ Phosphogypsum slurry management in Tunisia including the respective demonstration sites;
- ◁ Chromium and BOD control of tanneries effluent in target countries, including the respective demonstration sites – pilot in Turkey;
- ◁ Lubricating oil recycling and regeneration in target countries, including the respective demonstration sites – pilot in Algeria;
- ◁ Lead battery recycling in target countries, including the respective demonstration sites – pilot in Syria;
- ◁ Assessment of the magnitude of riverine inputs of nutrients into the Mediterranean Sea;
- ◁ Setting ELV in industrial effluents and EQS in all participating countries;
- ◁ Meetings among agencies responsible for permitting, inspection, and enforcement;
- ◁ Training workshop to provide practical guidance and uniformity on inspecting on the most commonly polluting and industrial facilities of the country;
- ◁ National final meeting for the assessment and feedback to propose solutions for the formulation of amendments of the existing legislation.

A second action under this component focuses on the **Transfer of Environmentally Sound Technology (TEST)**. This action, coordinated by MedPartnership, is implemented by the United Nations Industrial Development Organization (**UNIDO**). The project's first objective is to increase the knowledge of countries and donors on innovative technology to reduce pollution and increased scientific knowledge, by building capacity at the national level by adopting an integrated approach to industrial environmental management and demonstration of projects having implemented TEST. The second objective is to have stress reduction measures achieved through the demonstration projects and monitored at water-body level. This includes demonstration measures and investments to reduce industrial pollution at 12 companies, increasing water productivity by 40% and reducing pollution loads by 30%.

The third action under this component is on **Environmentally Sound Management of equipment, stocks and wastes containing or contaminated by PCBs in national electricity companies of Mediterranean countries (MED POL)**. The first objective is to implement NAP and National Implementation Plans' (**NIPs**) related actions for the Environmentally Sound Management (**ESM**) of equipment, stocks, and wastes contaminated with PCBs in national electricity companies of Mediterranean countries. The end-of-project target is to strengthen 5 countries' legislative and regulatory frameworks for the management of POPs and to remove tons of PCBs disposed of in 5 countries in order to phase out POPs from use. For this purpose, awareness is expected to be improved on the Environmentally Sound Management (**ESM**) of PCBs and the technical capacity for the **ESM** of PCBs, by trainings, workshops, and the dissemination of a toolkit of PCB for owners and policy-

makers, consisting of a PCB awareness video and a PCB website for use by participating countries and other Mediterranean countries.

The main activities presented under this subcomponent are the following:

- ◁ Legislative/institutional framework for implementation of ESM of PCBs;
- ◁ Demonstration projects in 5 countries to improve the management and disposal programme of PCBs;
- ◁ Raising awareness of importance of ESM of PCBs equipment;
- ◁ Technical capacity building for ESM of PCBs equipment;
- ◁ Building national capacity to implement PCBs phase-out and disposal programmes.

2.2.2 *Marine Litter*

The Marine Litter Regional Plan was adopted at COP18, as the first Regional Plan on Marine Litter by a Regional Sea Convention (Decision IG. 21/7) and entered into force on the 8th of July 2014.

Its Article 6, *Coherence and integration of measures*, states that the Contracting Parties should make every effort to make sure that the measures provided in the Article 7-10 are implemented in a coherent manner in order to achieve good environmental status and respective targets on marine litter and also mentions that various actors should be involved in the development and implementation of agreed measures as provided for the Article 7.

The Article 7, *Integration of marine litter measures into the LBS National Action Plans*, requests the development and implementation of appropriate policy, legal instruments, and institutional arrangements, including solid waste and sewer system management plans, which shall incorporate marine litter prevention and reduction measures. There is also a measure required to raise awareness by the development education programmes by the Contracting Parties.

The Article 8 *Legal and institutional aspects* state that the Contracting Parties shall ensure institutional coordination and close coordination and collaboration between national, regional, and local authorities in the field of marine litter.

Furthermore, the Article 9 *Prevention of marine litter* focuses on the prevention measures for land based sources and sea-based sources. For land-based sources, specific date for the achievement of the objectives is stated.

The Regional Plan also requests the producers, manufacturer brand owners, and first importers to be more responsible for the entire life-cycle of the product and also sustainable procurement policies contributing to the promotion of the consumption of recycled plastic-made products.

This Regional Plan also encourages the Contracting Parties to establish voluntary agreements with retailers and supermarkets to set an objective of reduction of plastic bags consumption as well as for selling dry food or cleaning products in bulk and refill special and reusable containers. There also should be some fiscal and economic instruments to promote the reduction of plastic bag consumption. Another measure described is the establishment of deposit, return, and restoration systems for expandable polystyrene boxes in the fishing sector and also the establishment of deposit, return, and restoration systems for beverage packaging, prioritizing when possible their recycling. The Regional Plan also promotes establishing procedures and manufacturing methodologies together with plastic industry in order to minimize the decomposition characteristic of plastic, to reduce micro-plastic pollution.

For sea-based sources, there is an economic incentive established by charging reasonable cost for the use of port facility or when applicable, apply No-Special-Fee system. Other measures include the

implementation of the “Fishing for Litter” system - in consultation with the competent international and regional organizations in order to facilitate clean up of floating litter and the seabed from marine litter caught incidentally and/or generated by fishing vessels in their regular activities including derelict fishing gears. There are measures further describe measures to prevent any marine littering from dredging activities by 2020, and take enforcement measures to combat dumping in accordance with national and regional legislation, including littering on the beach, illegal sewage disposal in the sea, the coastal zone, and rivers in the area of the application of the Regional Plan.

Article 10, *Removing existing marine litter and its environmentally sound disposal*, aims to identify hotspots and implement national programmes to remove disposal in a sound manner regularly. These measures include also communication, stakeholder involvement, and awareness raising measures with the implementation of National Marine Litter Cleanup Campaigns and the Participation in International Cleanup Campaigns and Programmes on a regular basis. Finally, there is also a measure to enhance public participation with regard to marine litter management. The application of Adopt-a-Beach or similar practices enhance the public participation role with regard to marine litter management awareness raising .The application of Fishing for Litter practices in consultation with the competent international and regional organizations and in partnership with fishermen. Finally, the Regional Plan has another economic incentive measure by inviting the Contracting Parties to charge reasonable costs for the use of port reception facilities or, when applicable, apply No-Special-Fee system in consultation with competent international and regional organizations when using port reception facilities.

This Regional Plan relates to the following EcAp Targets:

- Decreasing trend in the number of/amount of marine litter (items) deposited on the coast;
- Decreasing trend in the number/amount of marine litter items in the water surface and the seafloor;
- Decreasing trend in the cases of entanglement or/and a decreasing trend in the stomach content of the sentinel species.

2.3 Key Gaps identified by the Secretariat in relation to pollution and litter

Pollution related measures have a long-standing history in the Mediterranean, with the 1976 Barcelona Convention and various pollution-related Protocols, the SAP/MED triggering national implementation and further regional cooperation, NAPs adopted by all Contracting Parties, and Regional Plans covering to some extent specific EcAp Targets.

Based on the previous on the pollution and litter related measures and assessment of marine pollution, the Secretariat has identified the following gaps:

Common Regional Gaps

- ◁ Strengthening the implementation of the Regional Strategy for Prevention of and response to marine pollution from ships
- ◁ Adopting and implementing an Offshore Action Plan in a timely manner
- ◁ Further cooperation with other Regional Sea Conventions/Bodies in relation to pollution and litter

Common National Gap

- ◁ Update the current NAPs in line with the Regional Action Plans, Strategies, and the relevant EcAp Targets (already in process)
- ◁ Further need to enhance implementation of regional measures

- ◁ Lack of sufficient implementation of the Regional Strategy for Prevention of and response to marine pollution from ships

Priority Gaps and Recommendations

The Secretariat has identified the following to be priority gaps in relation to pollution and marine litter:

- ◁ Analysing potential new Regional Plans on desalination and agriculture
- ◁ Strengthening country-level implementation

Based on the above and the previous analyses on the pollution and litter related measures and assessment of marine pollution, the Secretariat also gives the following recommendations regarding the gaps identified:

- ◁ Implementing measures to reduce and prevent pollution regardless of various activities already undertaken in this field by the Contracting Parties with support from UNEP/MAP components, through MedPartnership as well as through Horizon 2020, in cooperation with other partners;
- ◁ Stricter technical guidelines and management standards or, if need be, other regional plans on sectors contributing to marine pollution such as agriculture, aquaculture, tanneries, and desalination may also need to be considered.
- ◁ Potential further additional measures and actions include considering potential regional plans on desalination and agriculture as well as to refining and revising the list of priority contaminants in the Mediterranean. These proposals are all relevant to the achievement of GES in the Mediterranean and as such, during their planned developments the relevant EcAp Targets will be specifically addressed.
- ◁ Discuss on an expert level potential new measures for desalination and agriculture
- ◁ Provide country-specific capacity building and trainings based on each country's needs

3. Coast and Hydrography related measures

Coastal zones are among the most productive areas in the world, offering a wide variety of valuable habitats and ecosystems services that have always attracted humans and human activities. The beauty and richness of coastal zones have made them popular settlement areas and tourist destinations, important business zones and transit points. Currently more than 150 million citizens live near coastlines of the Mediterranean Sea.

This intensive concentration of population and excessive exploitation of natural resources unfortunately also puts enormous pressure on our coastal ecosystems leading to biodiversity loss, habitats destruction, and pollution, as well as conflicts between potential uses and space congestion problems.

Coastal zones thus are also among the most vulnerable areas to climate change and natural hazards. Risks include flooding, erosion, sea level rise, and also extreme weather events. These impacts are far reaching and are already changing the lives and livelihoods of coastal communities.

Because the well-being of populations and the economic viability of many businesses in coastal zones depend on the environmental status of these areas, it is essential to make use of long term management tools, such as integrated coastal management, to enhance the protection of coastal resources while increasing the efficiency of their uses. A sectoral approach leads to disconnected decisions that risk undermining each other and to inefficient use of resources and missed opportunities for more sustainable coastal development.

Integrated coastal management aims for the coordinated application of the different policies affecting the coastal zone and related to activities such as nature protection, aquaculture, fisheries, agriculture, industry, offshore wind energy, shipping, tourism, development of infrastructure, and mitigation and adaptation to climate change. It will contribute to sustainable development of coastal zones by the application of an approach that respects the limits of natural resources and ecosystems, the so-called “ecosystem based approach”.

Integrated coastal management covers the full cycle of information collection, planning, decision-making, management, and monitoring of implementation. It is important to involve all stakeholders across the different sectors to ensure broad support for the implementation of management strategies.

The importance of conserving coastal zones was formally recognized by the adoption of the Agenda 21 at the Rio Summit in 1992. Since that time, efforts are deployed by UNEP/MAP towards ensuring healthy and sustainable coastal zones.

Hence, the Barcelona Convention was reviewed to include coastal zones and the Protocol on Integrated Coastal Zone Management in the Mediterranean (**ICZM Protocol**) was adopted in 2008 and entered into force in 2011. Furthermore, at COP17, Contracting Parties adopted an ICZM Protocol Action Plan to support the implementation of the ICZM Protocol with a clear timeframe of 2012-2019.

The ICZM Protocol constitutes the first regional, legally binding instrument specifically aimed at coastal zone management. As such, it is broken down into seven parts (General provisions; Elements of ICZM; Instruments for ICZM; Risks affecting the coastal zone; International cooperation; Institutional provisions; Final provisions), which address four main building blocks⁹⁰, as follows:

1. The adaptation of coast-related sectoral policies and regulation of coastal activities: this may include strengthening broader environmental policies for fragile coastal ecosystems, applying more stringent norms to agriculture or building, promoting codes of good practice for aquaculture or off road driving, etc.;
2. Governance processes: institutional coordination, public participation, access to justice;
3. Spatial planning: urban, regional, and marine spatial planning;
4. Regional cooperation: exchange of experiences and transboundary issues.

The Protocol sets out a framework of measures, following the above key areas, including actions such as the establishment of coastal setback zones, undertaking vulnerability and hazard assessments, anticipating coastal erosion, providing access to the sea and coastal zone, defining indicators for the development of economic activities, taking into account the sensitivity of coastal zones when carrying out environmental impact assessments for projects, regulation and restriction of certain activities, insuring inter-sectoral coordination, information-sharing, awareness raising, ensuring public participation, using strategic planning, formulating National Strategies on ICZM, and establishing transboundary cooperation on training and research, on information exchange, and on strategic planning.

⁹⁰ As described in the Guidance developed by PAP/RAC-MedPartnership: A contribution to the interpretation of legal aspects of the Protocol on Integrated Coastal Zone Management in the Mediterranean, available online: http://www.pap-thecoastcentre.org/regional_MedPartnership_workshop/documents/ICZM%20Protocol_Legal%20aspects.pdf

3.1 The ICZM Protocol Action Plan

The ICZM Protocol Action Plan⁹¹, with the timeframe of 2012-2019, was adopted at COP17 by the Contracting Parties, aiming to:

1. support the effective implementation of the ICZM Protocol at regional, national, and local levels including through a Common Regional Framework for ICZM;
2. strengthen the capacities of Contracting Parties to implement the Protocol and use in an effective manner ICZM policies, instruments, tools, and processes; and
3. promote the ICZM Protocol and its implementation within the region, and promote it globally by developing synergies with relevant Conventions and Agreements.

The individual measures included in the Action Plan are structured according to these three objectives above, reflecting the nature and scope of the Action Plan, which is not meant to be prescriptive but to respond to the needs of different administrative situations across the region.

Regarding the first objective above, the Action Plan highlights the importance of ratifying and transposing the requirements of the ICZM Protocol by all parties, the support to be given by UNEP/MAP components, specially PAP/RAC to Contracting Parties for the implementation, the strengthening of ICZM governance (noting the PEGASO Project developed ICZM Platform⁹²), and the need for inter-sectoral and regional cooperation (establishing a common regional framework for ICZM in the revised Mediterranean Strategy for Sustainable Development (MSSD)).

It also underlines under this objective the importance of adopting National Strategies and Coastal Implementation Plans and Programmes and reporting on Protocol Implementation and Monitoring the State of the Mediterranean coastal zones.

Under Objective 2, the Action Plan foresees the development and testing of ICZM Guidelines at national and local level, as well as the development of demonstration projects in key sectors and training/educational activities. Such demonstration projects have been undertaken already by Coastal Area Management Programmes (CAMPs) (please see also later in more details by the next point) and by other relevant projects such as PEGASO and MedPartnership.

Under Objective 3, the Action Plan highlights the importance of public participation and awareness-raising, with the utilization of annual Coast Day celebrations⁹³ and other initiatives to support ICZM awareness across the region.

In addition, the Action Plan lists key players in the region, such as UNEP/MAP, EU, MedPartnership, and Union for the Mediterranean, and aims to establish cooperation on the regional level as well between these institutions/project.

This Action Plan was subject to mid-term review and an evaluation to coincide with the end of the existing 5-year UNEP/MAP programme in 2014.

To this end, PAP/RAC, supported by MedPartnership, prepared *Guidelines for the preparation of National ICZM Strategies required by the Integrated Coastal Zone Management (ICZM) Protocol for the Mediterranean*⁹⁴ and explanatory reports, supported by IPA Adriatic funds, for some specific requirements of the ICZM Protocol, such as Article 7 on Institutional coordination and Article 8 on the establishment of the coastal setback zone, in order to *inter alia* demonstrate how ICZM should

⁹¹ <http://www.pap-thecoastcentre.org/razno/Decision%20%20-%20ICZM%20Action%20Plan.pdf>

⁹² <http://www.pegasoproject.eu/iczm-platform-5>

⁹³ <http://www.coastday.org/>

⁹⁴ http://www.maremed.eu/pub/agenda/232_en.pdf

implement EcAp in coastal areas. This guidance also provides an integrated planning framework in relation with key sectors in the coastal zone including: water, biodiversity, agriculture, fishery, energy, tourism sporting and recreational activities, utilization of specific natural resources, cultural values, landscape, transport, infrastructure, and other economic activities that may affect the coastal zone, as well as the integration of the specificities of climate change in the coastal zone. It is further mentioned in the document that these national strategies aim to ensure a coherent “spatial planning” and an integrated connection between land and sea areas.

Key achievements of implementation of the ICZM Protocol and Action Plan include, in addition to the above work, the CAMP demonstration projects integrating ICZM principles (please see further under at point 2), the Pegaso project developed ICZM process which is available at coastal wiki⁹⁵, the MEDOpen Virtual Training on ICZM available on the PAP/RAC website⁹⁶, and the annual celebration of the Mediterranean Coast day, which has taken place from 2007 on and created ownership for ICZM in the regional level.

The **PEGASO project** has undertaken an analysis of the legislative, policy, and financial framework for ICZM governance for both the 21 states of the Barcelona Convention for the Mediterranean and the 6 states of Bucharest Convention for the Black Sea. This analysis (*Final global results of the ICZM stock-taking*) was finalized in 2013 based on a comprehensive and exhaustive ICZM Implementation Audit Questionnaire prepared by PAP/RAC.

Key findings of this ICZM stock-taking exercise include:

- ◁ 6 countries already have mechanisms for land and marine coordination, and 11 countries have mechanisms “in preparation” with coordination as a key issue. Models of round tables include the “Grenelle de l’Environnement” in France and the “Colls Miralpeix” in Spain, which represent institutions created with the purpose of implementing the ICZM Protocol which acts as a coordinating body at the regional and local level. There are also horizontal and vertical coordination mechanisms created by the countries. Indeed, 8 countries declared having mechanisms for horizontal coordination and 11 were in preparation.
- ◁ An example of horizontal coordination mechanism, CAMPs were identified (see more by next point), which act as a driver to the implementation of the ICZM Protocol at the local level.
- ◁ In total, 13 countries have other existing measures consistent with this Article and 5 of the ICZM Protocol, and other countries have partially extended legal tools such as national strategies for sustainable development. For instance, Algeria has established the National Master Plan which sets terms of conservation, protection and enhancement of coastal zones and continental shelf, as well as the “Master Plan du Littoral” for coastal and marine areas setting specific requirement of conservation and recovery.
- ◁ For 15 countries, urban development is subject to statutory restrictions, but five countries do not have restrictions to urban development. The restrictions vary from limitations mainly for the industrial and tourist sectors to the prohibition of development in protected areas. In other cases, the limitations concern specific activities, such as soil and underground resource exploitation. It is further added that the definition of areas of special interest where urban development is restricted depends on the national strategies and plans for specially protected areas and for strategic economic activities of public interest. For instance, in Italy, there is a National Strategy of Adaptation to Climate Change that deals with the specificities of “hydrogeological” risk which include coastal areas and introduce “Measures of Safeguard”. Moreover, in Montenegro, within the CAMP Montenegro project, an analysis of the urbanization of the Coastal Zone in Montenegro had been prepared;
- ◁ Regarding limiting the linear extension or urban development and the of new transports infrastructure along the coast, only 9 countries have legal frameworks consistent with the Protocol requirements.

⁹⁵ [http://www.pegasoproject.eu/wiki/Integrated_Coastal_Zone_Management_\(ICZM\)](http://www.pegasoproject.eu/wiki/Integrated_Coastal_Zone_Management_(ICZM))

⁹⁶ <http://www.medopen.org/>

- ◁ Freedom of access by the public to the sea and along the shore is a widespread principle which is protected by law in 17 countries.
- ◁ Regarding restricting or, where necessary, prohibiting the movement and parking of land vehicles, as well as the movement and anchoring of marine vessels, in fragile areas on land and sea, including beaches and dunes, 12 countries have relevant legislation in place (with clear guidelines for protected areas management), while 6 have it in preparation;
- ◁ Regarding marine habitats, measures concerning this requirement of the Protocol have been largely adopted (17 countries, 2 in preparation). Some countries have not only adopted laws, but they also have created institutions dedicated to coastal and marine protection, which help regulate planning and management in specially protected areas. For example, the Pelagos Sanctuary for Marine Mammals is an example of a large scale project for the development of specific measures ensuring the protection and conservation of marine and coastal habitats. Also, the foundations of an integrated Marine Strategy in Greece were laid down through the “Law on the National Strategy for the protection and management of Marine Environment”.
- ◁ In 14 countries, measures have been taken to involve relevant stakeholders in the processes of formulation and/or implementation of coastal and marine strategies, plans and programmes. Furthermore, 12 countries have inquiries and/or public hearings in the formulation and implementation of coastal and marine strategies. Moreover, a total of 8 countries have measures for partnerships to ensure the involvement of stakeholders;
- ◁ Nearly half of the countries reported some awareness raising, education, training, and public programmes regarding ICZM at national level (for example Montenegro referred to the Mediterranean Coast Day).
- ◁ Regarding *Article 18, National Coastal Strategies, Plans and Programmes*, seven of the Mediterranean countries have an approved national strategy for the coast. However, it is mentioned that the Protocol has had little time to influence the shape of national strategies, although Algeria and Montenegro are preparing their strategies based on the Protocol principles as presented below. Guidelines for the preparation of national strategies in conformity with the Protocol are already available from PAP/RAC “Guidelines for the preparation of the National ICZM Strategies” (NICZMS).
- ◁ In the framework of *Article 21, Economic, Financial and Fiscal Instruments*, it is said that only a minority of states (3) indicate a positive use of economic or financial instruments to support ICZM. Such measures are under consideration in a further 7 countries. The approaches are diverse ranging from mechanisms specifically designed to achieve environmental benefits, such as the Balearic Islands’ “ecotax” – a *tax de sejour* on tourists, to the adaptation of local taxes on activities, such as fisheries, designed to raise revenue for environmental purposes.
- ◁ In regard to economic, financial, and/or fiscal instruments which are potentially counter to the objectives of ICZM, there is apparently a low level of narrative response to this question, and only 3 countries report instruments with potentially negative effects on ICZM.

Further, on national level implementation:

- ◁ Algeria - an operational ICZM strategy has been developed by the Algerian Ministry of Physical Planning and Environment (MATE) in 2005 and financed by the World Bank. The implementation of this strategy is underway. However, the need was felt to prepare a new National ICZM Strategy according to the Protocol principles; this strategy was prepared based on the PAP/RAC Guidelines within the MedPartnership project.
- ◁ Montenegro - drafted the National ICZM Strategy in 2006. The Strategy was finalized in 2008 and submitted to the Government, but has not been adopted. The Montenegrin National ICZM Strategy was revised to conform to the ICZM Protocol within the CAMP Montenegro project and was adopted (end June 2015) by the government.
- ◁ Morocco- recently (June 2015) adopted a new coastal law.
- ◁ France – “Blue Book: a national strategy for the seas and oceans” which sets out the national strategic directions for the sea and coastline was adopted in 2009.

- ◁ Spain – the Ministry of the Environment and Rural and Marine Affairs (*Ministerio de Medio Ambiente Medio Rural y Marino*) coordinated in 2007 the development of the *Estrategia para la Sostenibilidad de la Costa*.
- ◁ Croatia - the Sustainable Development Strategy for Croatia proposes a national ICZM Strategy. The Croatian response points out that the EU Marine Strategy Framework Directive and ICZM Protocol, places an obligation to develop two strategies; a Marine Strategy and an ICZM Strategy. Since both strategies are connected and based on the same principles it was decided to combine these two strategies in one strategic document – the “Strategy for the Management of Marine Environment and the Coastal Zone,” which is under preparation.

The ICZM Action Plan is related to the following EcAp Targets:

- Negative impacts due to new structure and minimal with no influence on the larger scale coastal system;
- Physical disturbance to sandy coastal induced by human activities should be minimized.
- The natural dynamic nature of coastlines is respected, and coastal areas are in good condition
- Integrity and diversity of coastal ecosystem, landscapes, and their geomorphology are preserved

3.2 CAMP demonstration projects

The implementation status of the ICZM Protocol and its Action Plan has been greatly advanced by the CAMP demonstration projects⁹⁷. CAMP is oriented at the implementation of practical coastal management projects in selected Mediterranean coastal areas, applying ICZM at the ground level.

As such, CAMPs address environmental and development problems on the ground in a cross-cutting manner and as such relate to various EcAp Targets, not strictly related only to ICZM EcAp Targets. CAMPs can also be seen as pioneers bringing together components and policies at a very specific areas to demonstrate how environmental/development problems should be solved and propose measures/actions for better quality of life including ecosystems and biodiversity. As such, they are a practical implementation of EcAp principles. CAMPs actually deal with all EcAp indicators where relevant in order to present ways with which environmental problems regarding ecosystems and biodiversity can be best addressed.

In the 1990-1998 period, two cycles of the CAMP Programmes were implemented, consisting of individual projects implemented in: Albania (The Albanian coast), Croatia (The Kastela Bay), Greece (The Island of Rhodes), Syria (The Syrian Coast), Tunisia (The City of Sfax), and Turkey (The Izmir Bay). The project in Fuka, Egypt, was completed in 1999, and the project in Israel in June 2000.

The third cycle of the Programme started in 1997 with the preparation of projects in Algeria, Lebanon, Malta, Morocco, and Slovenia, in accordance with the relevant decisions of the Contracting Parties.

CAMP Malta was completed in November 2002, CAMP Lebanon in December 2004, CAMP Algeria in January 2005, CAMP Slovenia in 2007, CAMP Cyprus in 2008, and CAMP Morocco in 2010. CAMP Spain, which was completed in 2013, entered its follow-up stage. In addition, CAMP in Montenegro has recently been completed, whereas CAMPs in Italy and France are currently underway and will take into account new development contexts. The intention is to streamline and upgrade CAMPs to the requirements of the ICZM Protocol, in particular with regard to public participation, institutional arrangements, and instruments for ICZM. An assessment of the CAMP has been conducted in 2015 and its conclusions will serve the improvements of the future CAMP cycle.

⁹⁷ http://www.pap-thecoastcentre.org/about.php?blob_id=22

Taking into account the importance of the ICZM Protocol as a powerful tool for the sustainable development of coastal zones, CAMPs are seen as the ICZM Protocol implementation projects at the local level, i.e. as prototype interventions to assist countries to implement the Protocol.

3.3 MedPartnership activities in relation to coast and hydrography

MedPartnership coordinates activities related to Coast and Hydrography in the framework of its first component on the integrated approaches for the implementation of the SAPs and NAPs: ICZM, IWRM and management coastal aquifer.

The first action undertaken under this project is the Management of Coastal Aquifer and Ground water, of which UNESCO-IHP is in charge. In order to ensure a coherent management system, the objective and expected outcome is to establish a regional legislation to strengthen aquifer management. The end of project target is to develop a Regional Action Plan on Coastal Aquifers for the next COP 15 as well as a regional plan for eco-hydrological management, land degradation, and protection of coastal wetlands. This project also aims to strengthen regional and national institutions for aquifer management including tools and guidelines. Also, land-management approaches are expected to be developed and applied at demonstration sites. This project also aims to find stress reduction measures that could serve as a baseline for future management of aquifers at water-body level. UNESCO, through the tools and guidelines it will develop, provides an enabling environment for the countries to implement appropriate management approaches for coastal aquifers and coastal wetlands that are dependent upon groundwater. Another objective of this project is to increase the scientific knowledge concerning the management of aquifers and groundwater through the assessment of risk and uncertainty related to Mediterranean coastal aquifers in all countries; in addition, coastal vulnerability mapping of aquifers at 3 sites in two countries and a Transboundary Diagnostic Analysis (TDA) supplement are expected to be developed for adoption.

The second action undertaken is on ICZM, of which PAP/RAC is in charge of the implementation. The first objective of this action is to establish regional legislation addressing ICZM as mechanisms to protect the Mediterranean from biodiversity loss and pollution from land based sources. In this framework, the development of a harmonization of national legislation with ICZM Protocol for 5000 km of the coast is also expected. The Regional and National institution are also expected to be strengthened for ICZM. Indeed, ICZM Strategies and NAPs should be submitted for adoption in a minimum of two countries containing proposals for ICZM institutional framework. Furthermore, an Integrative methodological framework (IMF) is expected to be developed and tested in a minimum of two demonstration areas (Buna/Bojana and Reghaia) for, after revision, their replication in other areas. The project objectives include also stress reduction measures achieved through ICZM and monitored at water-body level.

The completed or on-going activities presented are the following:

- ◁ Support activities in preparation of National ICZM Strategies and NAPs;
 - Support for the preparation of ICZM Strategies NAPs (demonstrations in Montenegro and Algeria);
 - Replication Activity: “Strategy for the Management of Marine Environment and the Coastal Zone” for Croatia;
 - Harmonizing national institutional arrangements and legislation with ICZM Protocol for the Mediterranean;
 - Integrative Methodological Framework (IMF) for convergence of groundwater/aquifers, water resources, biodiversity, and coastal management;
 - Improved integrative planning and use of ICZM methodologies and tools to support ICZM Protocol;
- ◁ Application of ICZM approach, tools, and techniques in demonstration areas;

- ICZM Plans to demonstrate ICZM approach, tools, and techniques in selected areas: (Reghaia in Algeria): ICZM Plan in transboundary demo area of high environmental sensitivity (Buna/Bojana in Montenegro and Albania);
- ICZM Plans to demonstrate ICZM approach, tools, and techniques in selected areas: ICZM Plan in wetlands/marine area of high value/sensitivity with MPA identification (Algeria).

The third action undertaken is on the Integrated Water Resources Management (**IWRM**) GWP-Med. The first objective of this action is to establish a Regional strategic plan addressing IWRM as a mechanism to protect the Mediterranean from biodiversity loss and pollution from land based sources. In this framework, a Strategy for Water in the Mediterranean is expected to be developed and technically facilitated and presented at the Union for the Mediterranean (**UfM**) Ministerial level with environmental considerations fully reflected. It is further added in the same document that as an objective, Regional and National institutions should be strengthened for IWRM. For this purpose, IWRM plans should be implemented *inter alia* in Egypt, Lebanon, Tunisia, and Palestine. Another objective is to develop an Integrated River Basin Management (**IRBM**) in globally important river basin(s) and adjacent coastal area by establishing an IMF between ICZM and IWRM. Under this project, it is also expected that Integrated River Basin Management for one water body will be finalized by 2014, pressures will be identified and local IRBM/ICZM planning roadmap prepared as a basis for a future management plan.

Some example actions in relation to the IWRM:

- ◁ Contribute to developing the new Strategy for Water (SWM) in the Mediterranean
 - Egypt: Catalyze Action and Build capacity on National IWRM Planning;
 - Lebanon: Catalyze Action and Build capacity on National IWRM Planning;
 - Tunisia: Catalyze Action and Build capacity on National IWRM Planning;
 - Palestine: Catalyze Action and Build capacity on National IWRM Planning;
 - Develop Integrated Resources Basin Management (IRBM) in globally important river basin(s) and adjacent coastal area;
 - Replication Activity in Damour – Integrated Resources Basin Management (IRBM) in globally important river basin(s) and adjacent coastal area.

3.4 Key Gaps identified by the Secretariat in relation to coast and hydrography

While the Mediterranean region is a pioneer in relation to ICZM through its ICZM Protocol and Action Plan, the national level implementation of ICZM is still unsatisfactory.

In addition, the horizontal nature of ICZM (while it is also the strength of it) may constitute additional implementation challenges, especially in relation to national coordination and ensuring coherence with other national and regional relevant activities not necessarily carried out in the auspices of UNEP/MAP.

Common Regional Gaps

- ◁ The link with marine spatial planning as such is not strong enough yet, and ICZM could also constitute a stronger base for sub-regional strategies, such as the Adriatic-Ionian Strategy and could be stronger integrated in other horizontal work of UNEP/MAP as well.
- ◁ In addition, a specific gap was identified in relation to assessment on the use of management of coast, on which only a minority of countries have comprehensive information. Unfortunately there is no common methodology currently for interpreting the nature or the undertaking of such assessments. This may provide an area for further development, in particular for coastal ecosystems and landscapes.

- ◁ Gaps also exist here regarding the mapping of existing national instruments relating to alteration of hydrographical conditions, as well as to addressing specifically hydrographical conditions in relation to offshore activities on a common regional basis (on the latter the draft Offshore Action Plan foresees progress).
- ◁ In addition, research gap exists on climate change and alteration of hydrographical conditions in the Mediterranean.

Common National Gaps

- ◁ The marine spatial planning as such is not yet implemented to the level required in order to respond to the needs related to coordination of activities at sea and for the sustainable use of marine resources, and ICZM could also provide a stronger base for sub-regional strategies, such as the Adriatic-Ionian Strategy, or for closer transboundary cooperation and could be stronger integrated in other horizontal work of UNEP/MAP as well.
- ◁ CAMPs also constitute a unique opportunity to apply ICZM and EcAp principles on the ground, but the programme could be used even more for joint/common demonstration projects.
- ◁ While hydrography is not covered by a separate regional instrument, the ICZM Protocol Action Plan closely relate to it and as needed measures are site specific, it could be best addressed at national level. CAMP projects are expected to include hydrographic considerations in the future.
- ◁ Gaps also exist here regarding the mapping of existing national instruments relating to alteration of hydrographical conditions, as well as to addressing specifically hydrographical conditions in relation to offshore activities on a common regional basis (on the latter the draft Offshore Action Plan foresees progress).

Priority Gaps and Recommendations

- ◁ The link with maritime spatial planning is a main gap.
- ◁ Lack of adequate links between EcAp and ICZM during CAMP implementation.

Based on the above and the previous analyses on coast and hydrography, the Secretariat also gives the following recommendations regarding the gaps identified:

- ◁ Strengthen links between marine spatial planning and ICZM, both on country and sub-regional level.
- ◁ Strengthen links between EcAp targets, indicators, implementation needs, and ICZM in future CAMP and other demonstration projects.
- ◁ Strengthen links between the marine and land part of the coastal zone.

4. MSSD AND SCP: Horizontal measures relevant to EcAp targets

4.1 MSSD

The Mediterranean Strategy for Sustainable Development (MSSD)⁹⁸ was adopted by the Contracting Parties in 2005, as a regional response to the global agenda about sustainable development. It focuses mainly on the integration of environmental concerns into the key economic development sectors, while giving due consideration to social and cultural dimensions.

Defining four priority objectives, nine challenges and 34 sub-objectives, the MSSD set clear objectives and targets associated with follow-up actions. Adopting an integrated approach to economic and social development, environmental protection, and cultural advancement, the MSSD establishes four objectives aiming at promoting progress towards sustainability in the economic, social, and environmental areas and in the field of governance, as follows:

⁹⁸ http://195.97.36.231/dbases/acrobatfiles/05IG16_7_eng.pdf

- ◁ Objective 1: Contribute to economic development by enhancing Mediterranean assets;
- ◁ Objective 2: Reduce social disparities by implementing the MDGs and strengthen cultural identities;
- ◁ Objective 3: Change unsustainable production and consumption patterns and ensure the sustainable management of natural resources; and
- ◁ Objective 4: Improve governance at the local, national and regional levels.

An Assessment on the implementation of the MSSD for the period 2005-2010⁹⁹ that took place in 2011, concluded that while for some objectives the situation is improving, for others the situation is worsening, particularly the environmental ones. The report notes data availability problems, and difficulties with measuring the implementation of some of the objectives and orientations. Nevertheless, the thematic analysis (in its Table 2) indicates that much had been achieved regarding aspects such as sanitation and access to electricity, but also that much remains to be achieved for priorities such as climate change, energy intensity, water, and sustainable tourism.

The report concludes that the MSSD had not had a strong influence on National Strategies for Sustainable Development (NSSDs), particularly in EU countries which were influenced more strongly by EU policies. However it is noted that the MSSD was widely appreciated as a background document to inspire national strategies, and had proved to be influential at a strategic level.

Furthermore, it suggests that the MSSD 2.0 focuses on the areas where Mediterranean countries are furthest from the targets set in the current MSSD. The report also suggests adding new issues in the revised MSSD on health, adaptation to climate change, migration and climate change, green economy, and depletion of natural resource, and also suggests putting more emphasis on participatory approaches. It is also recommended to pay more attention to the financing of sustainable development as well as to include actions on capacity building, information exchange, and education in the MSSD 2.0.

The need of revision of the MSSD has become also clear by 2013, based on international developments. At COP 18 the Contracting Parties decided to revise the MSSD, in line with the outcomes of Rio+20 (UNEP(DEPI)/MED IG.21/9)¹⁰⁰. The MSSD review was formally launched in Malta, in February 2014.

The MSSD and the future, revised, MSSD 2.0 will provide important measures that are horizontally key for the successful implementation of the Ecosystem Approach in the region.

The current MSSD 1.0 envisages ‘...a “sustainable” Mediterranean that is politically stable, prosperous and peaceful ... based on a proactive choice of a “win-win” scenario in which the co-development of the North and the South is promoted, while exploiting the positive synergies of efficient environmental, developmental and economic management.’

Based on the 2013 Istanbul Declaration and the EcAp vision, the April 2014 MSSD Review consultation document presented the following draft updated vision for MSSD 2.0:

A sustainable Mediterranean region that is politically stable, prosperous and peaceful. Socioeconomic development as well as human health and wellbeing are jointly sought and depend on healthy Mediterranean marine and coastal ecosystems that are productive and biologically diverse. Furthermore, the recent Steering Committee of the MCSD (June 2014) recommended that the revised MSSD be focused on six thematic areas in line with the global process to achieve Sustainable

⁹⁹ http://195.97.36.231/dbases/MAPmeetingDocs/11WG358_Inf3_Eng.pdf

¹⁰⁰ Please also see on the Rio+20 outcome document “the future we want”:

<http://www.uncsd2012.org/thefuturewewant.html>

And on the ongoing SDGs international process: <http://sustainabledevelopment.un.org/owg.html>

Development Goals, the first one being Sea and Coast, towards reaching Good Environmental Status of the Marine and Coastal Mediterranean environments, thus encompassing the EcAp objectives. These six thematic areas are as follows:

1. *Seas and coasts*; including efforts towards reaching Good Environment Status of Mediterranean marine and coastal ecosystems;
2. *Natural resources*, rural development and food; including links not only to marine and coastal, but also terrestrial habitats, and to fresh waters;
3. *Climate*; including the impacts of climate change on natural resources and socioeconomic sectors and possible responses;
4. *Sustainable cities*; including coastal urbanization and Integrated Coastal Zone Management, land transport, waste management, infrastructure, housing, and energy;
5. *Transition towards a green economy*; including sustainable consumption and production, circular economy;
6. *Governance*; including financing, Aarhus Convention–related issues such as public participation, and cooperation.

4.2 SCP Action Plan

Sustainable Consumption and Production (**SCP**) is about the combined implementation of diverse measures involving policy makers, businesses, and civil society to redesign the way in which goods and services are produced and consumed to drive the revitalization of the industrial and socio-economic development towards non-pollutant, resource efficient and socially inclusive economies. In the Mediterranean region, SCP has been a strategic objective for the Barcelona Convention. Indeed, the Contracting Parties to the Convention have identified SCP as a thematic pillar of the Strategic Action Programme of the UNEP/MAP (United Nations Environment Programme - Mediterranean Action Plan) and as one of the overarching objectives of the Mediterranean Strategy for Sustainable Development. For instance:

- ◁ The 14th Conference of Parties (Portoroz, November 2005) adopted the Mediterranean Strategy for Sustainable Development (MSSD), which identifies changing “unsustainable production and consumption patterns” and ensuring “the sustainable management of natural resources” as a main objective to attain sustainable development in the region;
- ◁ The 16th Conference of the Parties of the Barcelona Convention (Marrakech, November 2009) identified sustainable consumption and production as one of the six thematic priorities of UNEP/MAP’s Strategic Five-Year Programme 2010-2014; and
- ◁ The 17th Meeting of the Contracting Parties (Paris, February 2012) reaffirmed the commitment of the Barcelona Convention to support, at Mediterranean level, capacity building and other activities associated with green economy as means to achieve sustainable development, such as the promotion of sustainable consumption and production patterns.

Moreover, building on the financial support provided by the European Union as part of the SWITCH-Med Programme (briefly presented below), at COP18 the Contracting Parties requested the Secretariat of the UNEP/MAP - Barcelona Convention *to prepare a Mediterranean SCP Action Plan, including the corresponding Roadmap addressing the Region’s common priorities for sustainable development, (i) including pollution reduction; and identifying SCP actions and tools to effectively implement the obligations under the Barcelona Convention and its Protocols,, (ii) integrating the potential of the different policy instruments and measures addressing targeted human activities which have a particular impact on the marine and coastal environment and related transversal/cross-cutting issues,, and (iii) working in synergy with and complement existing regional and national policy*

frameworks addressing the shift to sustainable patterns of consumption and production and in particular the MSSD.

The SWITCH-Med programme¹⁰¹ aims at facilitating the shift toward SCP in the Southern Mediterranean Region. Aiming at supporting industry, emerging green entrepreneurs, civil society, and policy makers, the programme has three main components: policy development, demonstration activities, and networking. The Policy component will strengthen relevant environmental governance and policy frameworks. With broad stakeholder participation, it will develop/refine national SCP policy action plans in the beneficiary countries and develop, among others, a regional SCP action plan under the Barcelona Convention.

Next to the MSSD, the future SCP Action Plan can be seen as a future horizontal EcAp measure, which can also address gaps identified in the current list of measures under UNEP/MAP/Barcelona Convention relevant to EcAp, namely in the food sector, tourism, goods manufacturing and consumption, and housing and construction.

4.3 Key Gaps identified by the Secretariat in relation to horizontal measures

The work on horizontal measures is still ongoing, and as such it is of most importance both for the success of these horizontal and other EcAp measures to address specifically, as much as possible, the identified gaps and to ensure in general the consistency between the EcAp measures undertaken inside the UNEP/MAP/Barcelona Convention system.

In addition, the MSSD review constitutes a unique opportunity to link the activities and EcAp measures undertaken by UNEP/MAP (and the Contracting Parties in its auspices) with the Sustainable Development Goals and as such to ensure consistency also in between the regional and international level.

Furthermore, the SCP Action Plan is an important horizontal tool to address short-comings of EcAp measures and as such provides unique opportunities to give tailor-made solutions to specific gaps through the usage of SCP.

For example, Art. 5 of the ICZM Protocol identifies food (agriculture and fishing) and tourism as key economic sectors. Likewise, the article requires the countries to implement measures for their sustainable development. To achieve that the planning and management of those sectors in the coastal areas must integrate the implementation of a range of technical, regulatory, economic, and market oriented measures through which the models of consumption and production driving the development of those economic activities shift to sustainable patterns. The development and implementation of those tools will require the involvement of policy makers, private sector (producers), civil society, and citizen (consumers). The Mediterranean SCP Action Plan as such provides a unique opportunity to define those measures and tools for the food and tourism sector and hence will become key in the implementation of the IZCM Protocol and its Action Plan objectives for the adapting the human activities associated to those mentioned sectors to the ECAP objectives

The SCP Action Plan will also be key in the implementation of the pollution reduction objectives established by the LBS and Hazardous Waste Protocols and their corresponding regional Plans, specifically addressing the reduction of pollution from the food and agriculture and goods manufacturing sectors. Furthermore, the SCP Action Plan provides an opportunity to integrate measures for marine litter prevention and that they are implemented

In addition, both the MSSD review and the SCP Action Plan both provide very much needed strengthened focus on public participation (the current initial gap analysis highlights many times also the need to strengthen public participation both in EcAp related decision-making and in the implementation of EcAp measures).

¹⁰¹ <https://www.switchmed.eu/en>

Conclusions and Recommendations

1. Key Conclusions of the draft Gap Analysis

In light of the analysis of the Secretariat, the Mediterranean coastal and marine environment is facing interlinked pressures with cumulative impacts, as mirrored by the EcAp Ecological Objectives and EcAp Targets, with the key drivers of population growth, urban sprawl, mass tourism, intensified industrial activities, including offshore, shipping, and (over)fishing.

The draft Gap Analysis however showcases that there are already existing regional and national measures necessary to achieve the above pressures and achieve the agreed EcAp Targets. As such, the core structure of an EcAp Programme of Measures (EcAp PoM) already exists, addressing all EcAp Targets.

The main challenge for the upcoming years, however, is to further strengthen this frame of the PoM, by focusing on addressing identified gaps and especially strengthening country level implementation.

Graph 1: the frame of the UNEP/MAP Barcelona Convention Programme of Measures

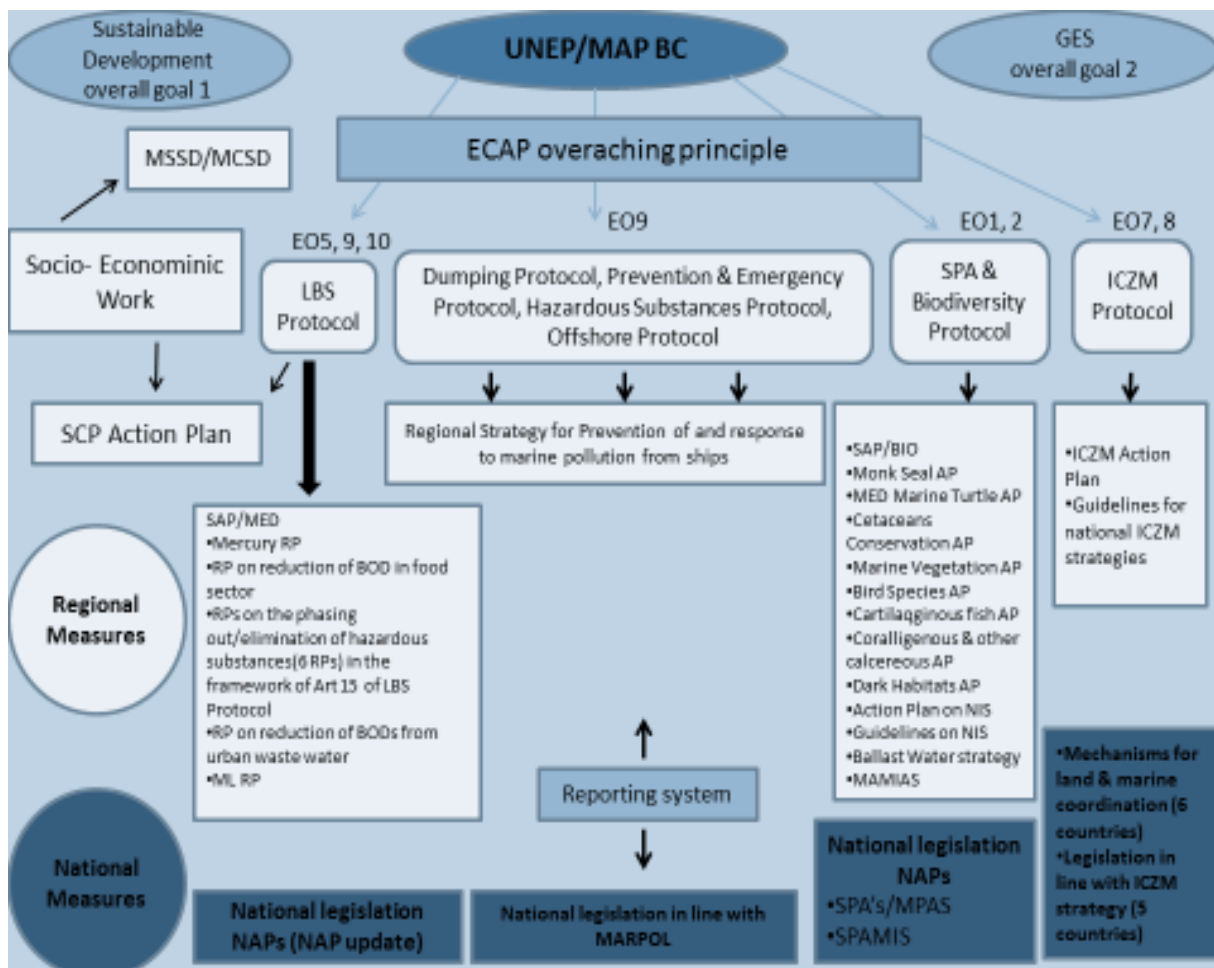


Table 1: EcAp Programme of Measures and level of implementation

Level of measure	Regional /National Measure to achieve good environmental status of the Mediterranean Sea and Coast	Implementation (national level)
Regional	UNEP/MAP Barcelona Convention (overall legal framework)	A
Regional	MSSD (overall framework for achieving SD in region)	Draft/under review
Regional	LBS Protocol	A
Regional	Dumping Protocol	B
Regional	Prevention and Emergency Protocol	B
Regional	Hazardous Substances Protocol	A
Regional	Offshore Protocol	B
Regional	SPA and Biological Diversity Protocol	A
Regional	ICZM Protocol	B
Regional	SAP/MED	A
Regional	SAP/BIO	C
Regional	Mercury Regional Plan	B
Regional	Regional Plan on the reduction of BOD5 in the food sector	B
Regional	Regional Plan on the phasing out of Hexabromodiphenyl ether, Hetabromodiphenyl ether, Tetrabromodiphenyl ether and Pentabromodiphenil ether	B
Regional	Regional Plan on the on the phasing out of lindane and endosulfane	B
Regional	Regional Plan on the phasing out of perfluorooctane sulfonic acid ,its salts and perfluorooctane sulfonyl fluoride	B
Regional	Regional Plan on the elimination of Alpha hexachlorocyclohexane, Betahexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, Pentachlorobenzene	B
Regional	Regional Plan on the Phasing Out of DDT	B
Regional	Regional Plan on the reduction of BOD5 from urban waste water	B
Regional	Regional Plan on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene	B
Regional	Regional Plan on Marine Litter	A
Regional	Regional Strategy for Prevention of and response to marine pollution from Ships	B

Level of measure	Regional /National Measure to achieve good environmental status of the Mediterranean Sea and Coast	Implementation (national level)
Regional	Mediterranean Strategy on Ships' Ballast Water Management	B
Regional	Action Plan for the management of the Mediterranean Monk Seal	B
Regional	Action Plan for the Conservation of Mediterranean Marine Turtle	B
Regional	Action Plan for the conservation of cetaceans in the Mediterranean Sea	B
Regional	Action Plan for the conservation of marine vegetation in the Mediterranean Sea	B
Regional	Action Plan for the conservation of bird species listed in Annex II of the Protocol on Specially Protected Areas and Biological Diversity	B
Regional	Action Plan for the conservation of cartilaginous fishes (Chondrichthyans) in the Mediterranean	B
Regional	Action Plan for Coralligenous and other Calcareous Bio-Concretions	B
Regional	Dark Habitats Action Plan	B
Regional	MAMIAS	C
Regional	Draft Offshore Action Plan	Draft
Regional	Action Plan for the implementation of the ICZM Protocol 2012-2019	B
Regional	Guidelines for national ICZM Strategies	B
Regional	Draft SCP Action Plan	Draft
National	National Action Plans related to Pollution and Litter	C
National	National Action Plans related to Biodiversity and NIS	C
National	SPAMIs	B
National	MPAs, SPAs	B
National	Mechanisms for land and marine coordination	B

Definition of Measure

In the framework of the Barcelona Convention, EcAp measures cover management measures undertaken on a common regional basis and, where appropriate, with specific time limits for completion, with the overall aim of achieving the good environmental status of the Mediterranean coast and sea.

Categorizes the existing measures:

- (A) Existing measure adopted and implemented (part of national legislation and/or followed up by specific measures);
- (B) Existing measure adopted but not yet implemented (not part of national legislation and/or not followed up by specific measures);
- (C) Existing measures covering issues linked to EcAp Environmental Objective, but not going far enough for target achievement..

2. Key, priority gaps identified, which need to be addressed in order to achieve GES in the Mediterranean

Priority Regional Gaps

- ◁ Gaps in ratification of the Barcelona Convention's Protocols;
- ◁ Gaps in public participation and information sharing;
- ◁ Compliance mechanism needs further strengthening;
- ◁ SAP/BIO and SAP/MED does not reflect fully EcAp Targets;
- ◁ Additional regional gap in relation to NIS is the lack of funding to operate MAMAIAS;
- ◁ In relation to coast, ICZM is not fully integrated in other regional and sub-regional measures and opportunities and challenges offered by Marine Spatial Planning are not fully clear.

Priority National Gaps

- ◁ Based on the 2012-2013 country reports, the need for strengthened national level implementation is clear in relation to all of the Protocols and regional measures.
- ◁ Public participation and science-policy interface are two key issues which were identified horizontally which hinder implementation and efficiency of measures and these could be further strengthened in relation to all EcAp measures ;
- ◁ Taking into account that NAPs relating to pollution and litter are already in the process of being updated, in relation to biodiversity and NIS the National Action Plans still need to be updated in order to fully reflect EcAp Targets;
- ◁ In relation to coast, the gap in national implementation can be highlighted;
- ◁ In relation to hydrography, the main gaps were identified as lack of scientific knowledge as well as information on existing national instruments.

Possible new regional measures identified

While the key conclusions of the Secretariat highlight the importance of strengthening the existing frame of UNEP/MAP Barcelona Convention PoM, with a focus on national implementation, the draft Gap Analysis also identified some potential new measures.

Stricter technical guidelines and management standards or if need be other regional plans on sectors representing multiple pressures on the marine and coastal environment, such as agriculture, aquaculture, tanneries and desalination (with suggestion of new regional-level measures to be analysed/ developed in co-operation with relevant regional partners, such as GFCM , taking into account future socio-economic analyses, noting that all new measures will need to be accompanied by such analyses).

3. Key recommendations of the Secretariat on strengthening implementation of the UNEP/MAP Barcelona Convention PoM to achieve GES of the Mediterranean Sea and Coast

Regional level/common to all EOs:

- ◁ Need to strengthen ratification efforts of the amended Convention and its Protocols. The Secretariat should continue its effort to achieve universal ratification of the amended Convention by all Contracting Parties and further encourage Contracting Parties to ratify all of its Protocols;
- ◁ Strengthen public participation and information sharing;
- ◁ Strengthening information/reporting provided by the Contracting Parties (the Secretariat to finalize the revised reporting format and ensure as much as possible synergies with other reporting obligation of the Contracting Parties under other regional and international obligation);
- ◁ In line with decision IG.21/1., the Contracting Parties must comply with their reporting obligation on time, using the standardized report from available online, concerning measures taken to implement the Barcelona Convention and its protocols as well as the decisions of the meeting of the Contracting Parties;

National level/common to all EOs:

- ◁ Strengthen capacity–building, based on specific legal, institutional, and technical needs of the Contracting Parties (the Secretariat to undertake further country based analyses, on specific kind of needs of Contracting Parties);
- ◁ the Contracting Parties to provide more information on their implementation needs to the Secretariat, in order to achieve the Good Environmental Status of their seas and coast;
- ◁ the Secretariat to strengthen its resource mobilization efforts, with a focus on assisting Contracting Parties implementation needs, in country-specific, targeted manner;
- ◁ the Secretariat to provide targeted trainings and specific assistance mirroring country needs, in order to achieve good environmental status;
- ◁ the Secretariat to encourage sharing of best practices in between Contracting Parties and joint activities in order to address common challenges;
- ◁ Strengthen public participation and information sharing as well as science-policy interface;
- ◁ Apply the public trust approach in line with Article 4(2) of the Barcelona Convention.

Specific recommendations related to Biodiversity and NIS:

- ◁ Strengthen implementation of SAP/BIO and Biodiversity related Action Plans by a more detailed evaluation of the SAP/BIO implementation and by creation of new biodiversity related NAPs in line with the EcAp targets and support their national implementation;
- ◁ encourage the establishment of more MPAs and SPAMIs, noting that the list of EBSAs constitute a scientific starting point for further attention of the Contracting Parties describing ecologically or biologically significant areas in the Mediterranean;
- ◁ strengthen management of the MPAs and SPAMIs network;
- ◁ strengthen cooperation with other regional players, in line with the Aichi target and maritime spatial planning needs;
- ◁ undertake capacity-building activities based on specific country needs;
- ◁ further update MAMIAS and strengthen country level implementation of the Strategy and of the Action Plan, in line with the two guidance documents;
- ◁ strengthen science-policy interface and public participation

Pollution and Litter Related Recommendations:

- ◁ Implementing measures to reduce and prevent pollution regardless of various activities already undertaken in this field by the Contracting Parties with support from UNEP/MAP components, through MedPartnership as well as through Horizon 2020 in cooperation with other partners;
- ◁ Stricter technical guidelines and management standards or if need be other regional plans on sectors contributing to marine pollution such as agriculture, aquaculture, tanneries, and desalination may also need to be considered;
- ◁ Potential further additional measures and actions include considering potential regional plans on desalination and agriculture as well as to refine and revise the list of priority contaminants in the Mediterranean. These proposals are all relevant to the achievement of GES in the Mediterranean and as such, that during their planned developments, the relevant EcAp Targets will be specifically addressed;
- ◁ Finalize the process for updating NAPs in line with Regional Plans, Strategies, and relevant EcAp targets;
- ◁ Discuss on an expert level potential new measures for desalination and agriculture;
- ◁ Provide country-specific capacity building and trainings based on each country's needs

Coast and Hydrography Related Recommendations

- ◁ Improve links between EcAp and ICZM during CAMP Implementation
- ◁ Strengthen links between marine spatial planning and ICZM, both on country and sub-regional level
- ◁ Strengthen links between EcAp targets, indicators, implementation needs, and ICZM in future CAMP and other demonstration projects
- ◁ Strengthen links between the marine and land part of the coastal zone
- ◁ Strengthen scientific knowledge and information on existing national instruments
- ◁ Highlight and address gaps in national implementation

Note on the public trust approach¹⁰²

In line with Article 4 of the Barcelona Convention, the Secretariat is encouraging Contracting Parties to apply the Public Trust Approach to further strengthen national implementation. In fact, the Public Trust Approach is clearly indicated in the Preamble of the Barcelona Convention (para. 2) and in Article 4 of the Convention

As is provided in Article 4:

1. The Contracting Parties shall individually or jointly take all appropriate measures in accordance with the provisions of this Convention and those Protocols in force to which they are party, to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea and to protect and enhance the marine environment in that area so as to contribute towards its sustainable development.
2. The Contracting Parties pledge themselves to take appropriate measures to implement the Mediterranean Action Plan and, further, to pursue the protection of the marine environment and the natural resources of the Mediterranean Sea Area as an integral part of the development process, meeting the needs of present and future generations in an equitable manner. For the purpose of implementing the objectives of sustainable development the Contracting Parties shall take fully into

¹⁰² The public trust approach, a concept worth exploring for the implementation of the ecosystem approach in the Mediterranean, was first proposed by a UNEP/MAP Partner at the MAP Focal Points Meeting (Athens, 19-21 May 2015)"

account the recommendations of the Mediterranean Commission on Sustainable Development established within the framework of the Mediterranean Action Plan.

3. In order to protect the environment and contribute to the sustainable development of the Mediterranean Sea Area, the Contracting Parties shall:

- (a) apply, in accordance with their capabilities, the precautionary principle, by virtue of which where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation;
- (b) apply the polluter pays principle, by virtue of which the costs of pollution prevention, control and reduction measures are to be borne by the polluter, with due regard to the public interest;
- (c) undertake environmental impact assessment for proposed activities that are likely to cause a significant adverse impact on the marine environment and are subject to an authorization by competent national authorities;
- (d) promote cooperation between and among States in environmental impact assessment procedures related to activities under their jurisdiction or control which are likely to have a significant adverse effect on the marine environment of other States or areas beyond the limits of national jurisdiction, on the basis of notification, exchange of information and consultation;
- (e) commit themselves to promote the integrated management of the coastal zones, taking into account the protection of areas of ecological and landscape interest and the rational use of natural resources.

4. In implementing the Convention and the related Protocols, the Contracting Parties shall:

- (a) adopt programmes and measures which contain, where appropriate, time limits for their completion;
- (b) utilize the best available techniques and the best environmental practices and promote the application of, access to and transfer of environmentally sound technology, including clean production technologies, taking into account the social, economic and technological conditions.

5. The Contracting Parties shall cooperate in the formulation and adoption of Protocols, prescribing agreed measures, procedures and standards for the implementation of this Convention.

6. The Contracting Parties further pledge themselves to promote, within the international bodies considered to be competent by the Contracting Parties, measures concerning the implementation of programmes of sustainable development, the protection, conservation and rehabilitation of the environment and of the natural resources in the Mediterranean Sea Area.

The Public Trust Approach works under the notion that a state is primarily its land and its people, and owes a duty to the both, as they are interconnected. The concept of the Public Trust Approach is based on the paradigm that it is the States' duty to manage and preserve natural resources in the best present and future interests of the public. Under this theory, the State has an obligation to act as a guardian over certain natural resources, a duty it owes to the present and future generations of its people.

The Public Trust Approach, rooted in the common law of trust and developed as a doctrine of Anglo-American Law, is expanding in Asia, Africa and South America and is also progressively embraced in the environmental legislation of the European Continental Countries. Already in France the concept of *domaine public* has been identified, in which the State is granted custodianship over natural resources like the seashore. In Italy as well, state authorities have been designated to take judicial recourse for damage to environmental resources on behalf of the interest of the community at large.

Three main principles have been identified upon which this custodianship must be based: conservation of option for future generations, conservation of quality for those generations that is comparable to previous ones, and conservation of access for all members of the present generation. These principles present certain obligations of the state for implementing environmentally sustainable policies and certain duties owed to not only the present generation but also to future generations.

In addition, the Public Trust Approach will provide the platform for more effective public participation in the implementation and advancement of the Barcelona Convention system, as well as more efficient institutional coordination, care, compliance and legislative implementation by the Contracting States.

While often acknowledged as a duty of the State, the Public Trust Approach is often considered a theoretical model and does not have strong legal backing. However, this problem can be overcome with public participation in the enforcement of international environmental law as well as through transnational review mechanisms. The multitude of lawsuits in which citizens are demanding their right to a protected and sustainably managed environment show that there can be legal courses through which the Public Trust Approach can be implemented. It is under this approach that citizens have the best legal chance at obliging the State to carry out its duties to protect the natural resources it is guardian over. In the absence of this way of enforcement of the fiduciary duties of the State, the trustee (state) has an uncontrolled power over the trust (environment) and the ultimate beneficiaries (the public) are deprived of any legal standing to preserve what needs to be preserved - ultimately for their benefit. The Public Trust Approach gives true meaning to the notion of public participation, that has generally proven to be inadequately enforced, leading to a higher likelihood of the State respecting its obligations towards its people and the environment.

4. Further reflections on public participation and on compliance, as on common priority gaps to be addressed in order to achieve GES in the Mediterranean

As public participation and information sharing was identified as common gaps in relation to all EOs, the Secretariat aims to provide some further analysis in relation to it, based on existing policies under the UNEP/MAP Barcelona Convention and relevant international and regional principles, policies, practices.

Existing policies of UNEP/MAP in relation to public participation and information sharing, as a basis for strengthening public participation and information sharing both on regional and on national level

In line with Article 15 of the Barcelona Convention:

1. “The Contracting Parties shall ensure that their competent authorities shall give to the public appropriate access to information on the environmental state in the field of application of the Convention and the Protocols, on activities or measures adversely affecting or likely to affect it and on activities carried out or measures taken in accordance with the Convention and the Protocols.
2. The Contracting Parties shall ensure that the opportunity is given to the public to participate in decision-making processes relevant to the field of application of the Convention and the protocols, as appropriate
3. The Provision of paragraph 1 of this Article shall not prejudice the right of Contracting Parties to refuse, in accordance with their legal systems and applicable international regulations, to provide access to such information on the ground of confidentiality, public security or investigation proceeding, stating the reasons for such a refusal.”

In line with the above, the UNEP/MAP Barcelona Convention public participation and information legal framework lays down the ground for giving environmental information to the public, allowing public participation in environmental decision-making, and giving access to justice to the public.

In relation to information sharing, UNEP/MAP also has specific objectives (as described in UNEP(DEC)/MED/GEF WG.245/7) and recommendations, such as:

- ◁ Raise awareness about the critical role that the UNEP-MAP system plays in the protection of the Mediterranean environment and the promotion of sustainable development in the region;
- ◁ Strengthen MAP's status as an authoritative voice on the environment in the Mediterranean;
- ◁ Engage key stakeholders to support UNEP-MAP issues and activities in public for and act as advocates, directly and indirectly;
- ◁ Highlight the need for good governance and integrated marine and land ecosystem management in the Mediterranean;
- ◁ Inform and mobilize the Mediterranean population with our narrative through key information and media channels;
- ◁ Improve internal communications practices within MAP and its components;
- ◁ Increase quality and quantity of media coverage;
- ◁ Improve quality and dissemination of information materials.

Moreover, UNEP/MAP, based on document UNEP/BUR/54/4/Corr.1, highlights the importance of publicizing the issues addressed, objectives pursued, and breakthroughs of UNEP/MAP, to as large and mixed a public as possible through various means of communication, providing access to information, and encouraging the public to participate and engage in dialogue.

Two means would be appropriate for this purpose in line with the "MAP Information Strategy" (UNEP/BUR/54/4/Corr.1 of UNEP MAP):

- ◁ The publication and dissemination of handbooks on public participation in environmental matters and in the preparation and implementation of the NAPs in particular, in the national language, in an easy to follow drafting style. Where appropriate, this information should be made available also through the Internet. Such handbooks should refer to the key issues mentioned in the previous section on "capacity building". In addition, they should refer to ways to make use of the already available provisions in the national legislation in the field of providing easy, quick, and inexpensive access to up-to-date environmental information on key elements of the SAP, upon request;
- ◁ The development of an efficiently operational, reliable, and regularly updated information system, accessible by the stakeholders. Information needs to be made available in forms that are appropriate for the country and the region.

The United Nations Environment Programme access-to-information policy document UNEP(DEPI)/MED WG.411/Inf.11 recognizes that it is critically important to disseminate and make accessible the information concerning its work or information generated through its programme as widely as possible. UNEP also recognizes that transparency, accountability, and openness can become a catalyst for achieving a greater impact. In particular in the context of Principle 10 of the Rio Declaration on Environment and Development, it is of fundamental importance to make available relevant information to stakeholders and the public in general.

UNEP does not provide access to information however under these circumstances:¹⁰³

1. "Cause harm to specific parties or interests.
2. Information received from or sent to third parties, under an expectation of confidentiality. UNEP does not provide access to financial, business, proprietary, or other non-public information that it receives in, or with the expectation that it will be treated in, confidence. UNEP does not grant access to information provided to it by a Member State or a third party, on the understanding of confidentiality, without the

¹⁰³United Nations Environment Programme access-to-information policy

express permission of that Member State or third party. This includes information, data, reports and analysis, deliberations.

3. Information whose disclosure is likely to endanger the safety or security of any individual, violates his or her rights, or invades his or her privacy.
4. Information whose disclosure is likely to endanger the security of Member States or prejudice the security or proper conduct of any operation or activity of UNEP. UNEP does not provide access to any information that if disclosed would or would likely prejudice an investigation or the administration of justice or violate the applicable law
5. Commercial information where disclosure would harm either the financial interests of UNEP or those of third parties involved.
6. Information, which, if disclosed, in UNEP's view would seriously undermine the policy dialogue with Member States or other partners".

Recommendations of the Secretariat on how to further strengthen public participation both on regional and national level

In light of the above, the strengthening of public participation could be achieved through existing legal obligations under the Barcelona convention, recognizing that people have the right to take part in basic decisions affecting their lives, but at the same time noting the need to protect sensitive data.

Based on the existing UNEP/MAP relevant policies and international and regional best practices, such as the ones under the Aarhus Convention, the following key recommendations are recommended by the Secretariat, to implement further the Barcelona Convention relevant Articles in relation to public participation and information sharing:

On regional level

- ◁ The UNEP/MAP Barcelona Convention data and information activities to be strengthened, to be able to provide reliable, quantitative assessment of the status of the Mediterranean Sea and Coast, with public access to this information;
- ◁ The UNEP/MAP Barcelona Convention data and information activities should further facilitate access and knowledge of the general public to environmental information;
- ◁ Make data and information available using harmonized standards and practices, following the UNEP access-to-information policy (UNEP/EA. 1/INF/23);
- ◁ Create an Integrated Monitoring and Assessment Programme (IMAP) for a comprehensive approach that will strengthen the quality and the validity of the data supplied;
- ◁ Ensure more knowledge of the public on the role and achievements of the UNEP/MAP Barcelona Convention;
- ◁ Support the development of educational programmes focusing on all aspects of environmental governance and issues in the Mediterranean related to the Barcelona Convention system and the Mediterranean Action Plan.

On national level

- ◁ Create an access to environmental information law or regulation;
- ◁ Let the public know which public authority holds which type of information;
- ◁ Have a system to help the public formulate properly directed requests;
- ◁ Set clear standards for time limits;
- ◁ Create a schedule for charges;
- ◁ Clearly define any exemptions;
- ◁ Require record keeping and reporting by public authorities and from operators to public authorities;
- ◁ Make lists, register and files publicly accessible free of charge;
- ◁ Develop environmental information offices and identify individual points of contact;

- < Create incentive for operators to give information directly to the public;
- < Public concerned must first be identified and then notified early in the process in an adequate, timely and effective manner;
- < Specific time frames must be established for the different phases.
- < Most provide enough time for informing the public and for the public to prepare and participate effectively;
- < When all the options are still open public participation may not be pro forma
- < Encourages exchange of information between permit applicants and the public where appropriate, before permit application, explanations must be provided and entered into dialogue;
- < Require public authorities to provide the public concerned with access to all information relevant to the decision-making, free of charge and as soon as available
- < Allow the public the opportunity to submit comments and observations with regard to information

Annex I

List of National Actions Plans under SAP/BIO

Albania

1. Action Plan for the proclamation of the Marine National Park of Karaburuni area
2. Action Plan for the rehabilitation of the Kune-Vain lagoon system
3. Action Plan for the Dalmatian pelican in Albania
4. Action Plan for building and exploitation of artificial reefs for the fisheries along the Albanian coast.

Algeria

1. Action Plan for setting up a network for monitoring of *Posidonia oceanica* meadows
2. Action Plan for setting up a programme to collect data on the Monk seal
3. Action Plan for reducing fishing activity pressure on coastal area biodiversity hot spots
4. Action Plan for inventorying and setting up marine and coastal protected areas in Algeria

Bosnia and Herzegovina

1. Action Plan for the identification and preservation of endangered marine, freshwater and terrestrial habitats and plant communities in the Mediterranean zone of Bosnia and Herzegovina
2. Action Plan for the sustainable development of the marine and adjacent waters of Bosnia and Herzegovina: cross border co-operation issue.

Croatia

1. Action Plan for a network of Mediterranean wetlands in Croatia – management and restoration
2. Action Plan to combat negative Impact of hunting, poaching and commercial collecting on coastal zone biodiversity, including introduction of new game species on islands
3. Action Plan for mapping, assessment and protection of submerged karstic phenomena;
4. Action Plan on biodiversity conservation as a part of integral coastal zone management planning.

Egypt

1. Bio-resources assessment of Mediterranean coastal waters of Egypt, development of Mediterranean Bio-Diversity Database, and public awareness for bio-conservation
2. Development and maintenance of the Matruh Nature Conservation Sector (MNCZ)

3. Bedouin operated bio-diversity conservation and restoration programme

Israel

1. Action Plan for the conservation of marine and coastal birds in Israel
2. Action Plan for the conservation of fish along the Israeli coast of Mediterranean

Lebanon

1. Action Plan for organising awareness campaigns for the Lebanese coastal communities and the public sector;
2. Action Plan for updating of legislation and development of for marine and coastal conservation;
3. Action Plan for determining the physical parameters of the Lebanese marine environment;
4. Action Plan for establishing conservation strategies for coastal habitats;
5. Action Plan for developing monitoring strategies for coastal and marine biodiversity;
6. Action Plan for Palm Islands & Tyre Coast Nature Reserves.

The State of Libya

1. Action Plan for the conservation of marine and coastal birds in The State of Libya;
2. Action Plan on proposed new marine and coastal protected areas and national parks
3. Action Plan for the conservation of marine turtles and their habitats in The State of Libya.

Malta

1. Action Plans for the conservation of cetaceans in Maltese waters;
2. Action Plan for estimating the sustainability of grouper fishing in Malta;
3. Action Plan for the conservation of sharks, rays and skate in the Maltese Islands;
4. Action Plan for the micro-cartography, mapping and surveillance of the *Posidonia oceanica* meadows in the Maltese Islands.

Montenegro

1. Inventory and mapping of sensitive areas;
2. Action plan for the Dalmatian pelican in Montenegro;

3. Assessment – revision of the status, regime and management practice of protected areas;
4. Identification of the new protected areas needing appropriate status of protection on the coastal zone;
5. Analysis of opportunities for and formulation of an appropriate funding strategy for biodiversity conservation

Morocco

1. Action plan for mapping Morocco's Mediterranean coast;
2. Action Plan for a research programme on Morocco's Mediterranean Biodiversity;
3. Action Plan for elaborating programmes and projects on education and awareness, and elaborating a guide to Morocco's endangered species and ecosystems;
4. Action Plan for improving the national legislation;
5. Action Plan for making best use of the Mediterranean marine biodiversity;
6. Action for protecting species threatened by traditional fisheries.

Slovenia

1. Action Plan on Habitat cartography supported by the Geographic Information System with special emphasis on seagrass meadows;
2. Action Plan for biological invasions and possible effects on biodiversity;
3. Action Plan on the impact of alien populations used in aquaculture on genome of wild populations of same species;
4. Action Plan on Slovene commercial fishery by-catch;
5. Action Plan for Sensitive ecosystems – *Posidonia oceanica* meadow (ecological conditions, cartography and monitoring based on the GIS Posidonie methodology)

Syria

1. Action Plan for the conservation of sea turtles along the Syrian coast;
2. Action Plan for marine and coastal protected areas;
3. Action Plan on invasive species and their impacts on marine biodiversity;
4. Action Plan for determination of physical parameters of national marine waters.

Tunisia

1. Action Plan for the impact of fishing activity on littoral biodiversity
2. Action Plan for a pilot monitoring of Posidonia meadows
3. Action Plan for Protecting coralligenous communities
4. Action Plan for the co-ordination and training on legal and institutional aspects
5. Action Plan for studying invasive species
6. Action Plan on awareness raising and education on biodiversity
7. Action Plan for establishing Centre for the protection of sea turtles

Turkey

1. Conservation of marine turtles in Turkey
2. Creation of marine protected areas along the Turkish coasts
3. Reducing the negative impacts of detrimental fishing practices (trawl, purse seine, spear fishing, use of explosives) on sensitive ecosystems and on vulnerable species;
4. Conservation of cetacean species in the Turkish water of the Aegean Mediterranean Sea

Annex II

Initiatives / Programmes, Projects Mapped relevant to EcAp Targets

Annex –II- INITIATIVES/ PROGRAMMES, PROJECTS MAPPED RELEVANT TO ECAP TARGETS

BIOCLEAN 2012-2015 (Biotechnological Solutions for the Degradation of Synthetic Polymeric Materials) /Funded by the European Union

BIOCLEAN aims at mitigating the impact of plastics on marine ecosystems, through the design of robust biotechnological solutions for the degradation and detoxification of plastic waste existing landfills and plastic fragments entering waste composting and anaerobic digesters. BIOCLEAN focuses more on achieving Ecological Objective (EO) 10 and advocates for the increase in the production of bio-based biodegradable plastics in Europe, since only less than 0.3% is produced in the continent. The project's total budget is € 3.000.000. BIOCLEAN is keen on collaborating with CLEANSEA on monitoring and remediation tools and on offering its expertise to the Technical Sub-Group on Marine Litter for the implementation of MSFD requirements relating to Descriptor 10. Activities planned in the near future also involve demonstrating the effectiveness of bio-augmentation protocols in Aegean seawater and a full-scale composting facility in Chania, Crete.

CleanSea Project 2013-2015 / Funded by the European Union

The CleanSea Project provides knowledge and tools to better define and monitor the impact of marine litter on ecosystems. CleanSea also proposes remediation techniques and policy options, with the overall objective of setting up a Roadmap to Good Environmental Status for Marine Litter in 2020. CleanSea is closely related to the EcAp, and particularly to EO 10. With an overall budget of € 3.788.527 CleanSea seeks to promote its vision for a clean sea through providing key scientific knowledge and tools from multiple disciplines to support marine litter policies and action plans. More specifically CleanSea already collaborates with PERSEUS and MEDSEA projects on sampling cruises and monitoring stations.

ClimVar ICZM (Integration of climate variability and change into national strategies for the implementation of the ICZM Protocol in the Mediterranean) / Funded by the Global Environment Facility

The overall project goal is to promote the use of ICZM in the participating countries as an effective tool to deal with the impacts of climate variability and change in coastal zones by mainstreaming them into the ICZM process. Specific objectives of the project are: 1. To strengthen knowledge on regional climate variability and change and their impacts and define their specific characteristics in the Mediterranean region; 2. To strengthen partnerships, improve capacity building and establish mechanisms for exchange of data and information for integration of climate variability and change into concrete ICZM policies, plans and programmes.

CoCoNET 2012-2016 (Towards COast to COast NETworks of marine protected areas (from the shore to the high and deep sea) coupled with sea-based wind energy potential/ Funded by the European Union

CoCoNET aims at enhancing cooperation around and capacity building on Marine Protected Areas (MPAs), while assessing the potential for Off-shore Wind Farms (OWF) in both the Mediterranean and the Black Seas, with a view to protecting sensitive habitats. The overall objective of CoCoNET is to produce guidelines to design, manage and monitor MPAs networks and OWF installations. The budget is € 9.000.000. CoCoNET is closely linked to the EcAp and specifically to EO 1, 6 and 7. CoCoNET will host a common General Assembly with PERSEUS in Athens early 2014, which will give space to both scientific communities to meet and interconnect.

CREAM 2011-2014(Coordinating Research in Support to Application of Ecosystem Approach to Fisheries and Management Advice in the Mediterranean and Black Seas)/ Funded by the European Union

The CREAM consortium coordinates key players involved in fisheries research and management in the Mediterranean and Black seas with a view to establishing guidelines that will apply the ecosystems approach to the management of Fisheries (EAF) in the respective regions. It includes the main institutes carrying out fisheries scientific research in the EU and in third countries, as well as one international organization promoting scientific capacitation/training (CIHEAM). CREAM also has an External Advisory Committee composed by representatives of the Regional Bodies which have particular responsibility in fisheries management in the Mediterranean and Black Seas. Through its work the consortium is trying to identify the gaps and promote training and capacity-building to harmonize and coordinate fisheries data sampling and related methodologies.

DEVOTES 2012-2016 (Development Of innovative Tools for understanding marine biodiversity and assessing good Environmental Status) /Funded by the European Union

The overall goal of DEVOTES is to advance our understanding of the relationship between pressures from human activities and climate change and how this affects marine ecosystems. DEVOTES focuses on EOs 1, 4 and 6. The outcomes of the project are expected to support the ecosystem-based management of marine natural resources and contribute to achieving GES of marine waters. To meet these targets scientists participating in DEVOTES are : i) analyzing existing and developing new innovative indicators to assess marine biodiversity in a harmonized way, within the four European Regional Seas ii) developing, testing and validating innovative and integrative modelling tools and monitoring techniques, such as remote sensing, high definition multi-beams and genomics iii) implementing cost-effective indicators, monitoring and management strategies and iv) preparing to propose measures to the European Authorities, which can contribute to the sustainable use of the seas and the marine resources. DEVOTES operates under a budget of € 12.000.000.

EcAp MED 2012-2015 (The Ecosystem Approach Project in the Mediterranean)/ Funded by the European Union

EcAp MED's objective is to support UNEP/MAP in implementing the 2008 COP decisions regarding the application of the EcAp in the Mediterranean in full synergy and coherence with the implementation of the EU's MSFD. To achieve this EcAp MED assesses the state of play in the Mediterranean, fuels cooperation between the different actors involved and overall aims to assist the achievement of the EcAp Roadmap's next steps, such as establishing an Integrated Monitoring and Assessment Programme in the Mediterranean, carrying out socio-economic assessment, developing assessment fact sheets, testing EcAp indicators/targets feasibility, next to reviewing relevant measures for the implementation of the EcAp, assisting the Marine Litter Regional Plan implementation and contributing to building a framework to facilitate the joint establishment of SPAMIs in open seas. The total budget of the project is € 1.716.000.

EMBLAS/UNDP 2013-2014(Improving Environmental Monitoring in the Black Sea) Funded by European Union

This one-year project assists partner countries, namely Georgia, Russia and Ukraine in performing marine environmental monitoring along MSFD principles, focusing primarily on improving the availability and quality of data on the chemical and biological status of the Black Sea. Significant effort will be put into training and capacity building. In order to promote ownership, engagement of local experts and organizations is foreseen. Relevant results and experiences of previous and ongoing projects will be duly taken into account.

EMWIS (Euro-Mediterranean Information System on know-how in the Water sector) Funded by European Union

EMWIS provides a strategic tool for exchanging information and knowledge in the water sector between and within the Euro-Mediterranean partnership countries.

GFNMI (Global Footprint Network's Mediterranean Initiative)/ Funded by the MAVA Foundation

Launched in 2010, GFNMI aims to develop a regional approach to managing resource-dependence and biocapacity. It aims to support sustainable management of resource consumption and natural capital.

GloBallast/ Funded by the Global Environment Facility

The GEF/UNDP/IMO Global Ballast Water Management Programme (GloBallast) is assisting developing countries to; reduce the transfer of harmful aquatic organisms and pathogens in ships' ballast water, implement the IMO ballast water Guidelines and prepare for the new IMO ballast water Convention. The first phase of the project was to tackle the ballast water problem. The second phase of the Programme, Building Partnerships to Assist Developing Countries to Reduce the Transfer of Harmful Aquatic Organisms in Ships' Ballast Water referred to as GloBallast Partnership (GBP) intending to build on the progress made in the original project. Private sector has also been achieved through establishing a GloBallast Industry Alliance with partners from maritime companies. The GloBallast Partnership is now implemented in 5 high priority sub-regions (The Caribbean, Mediterranean, Red Sea and Gulf of Aden, the South East Pacific and the West Coast of Africa) and one special new region (South Pacific) through 15 Lead Partnering Countries and more than 70 Partner Countries.

Horizon 2020 Initiative/ Funded by the European Union

The initiative aims to support the implementation of the National Action Plans to combat pollution from land based sources (LBS Protocol under Barcelona Convention) mainly industrial pollution, waste water and solid waste sectors: 1. Projects to reduce the most significant pollution sources focusing on industrial emissions, municipal waste and urban waste water; 2. Capacity-building measures to help EU neighbouring countries create national environmental administrations able to develop environmental laws; 3. Using the EC's Research budget to develop and share knowledge of environmental issues relevant to the Mediterranean; 4. Developing indicators to monitor the success of Horizon 2020.

IRIS-SES 2013-2015 (Integrated Regional monitoring Implementation Strategy in the South European Seas) / Funded by the European Union

The main objective of IRIS-SES is the development of a new concept and related decision-making tools to support integrated environmental monitoring within the MSFD framework, in order to better manage human activities and their effects in EU marine waters, specifically in the Mediterranean and Black Seas. The project will use existing sampling across various disciplines (physical, chemical, biological, etc) and will scope the potential for establishing joint programs (within and between Member States). Furthermore IRIS-SES will demonstrate a practical way of using existing resources more efficiently through for example the multiple uses of existing monitoring platforms. The project will collaborate with UNEP/MED POL, General Fisheries Commission for the Mediterranean and other organizations and EU projects, such as PERSEUS and MISIS and potentially DEVOTES and STAGES, in order to achieve its goals. The budget of the project is estimated at € 1.201.986.

KILL SPILL 2013-2016/ Funded by the European Union

KILL SPILL is currently developing highly efficient, economically and environmentally viable technologies to accelerate the biodegradation of hydrocarbons in the marine environment (water

column and sediments), with filed applications in the Mediterranean Sea and the Norwegian coast. The project is mostly related to EO 9 and has a budget of € 9.000.000.

MARLISCO 2012-2015 (Marine Litter in Europe's Seas: Social Awareness and CO-Responsibility) / Funded by European Union

MARLISCO is an FP7 – Science in Society project – that raises public awareness, triggers co-responsibility across the different sectors and facilitates dialogue between the different stakeholders on both problems and potential solutions regarding marine litter. MARLISCO provides a series of mechanisms to inform, empower and engage key stakeholders and its activities extend over the 4 Regional Seas of Europe, in 15 coastal countries. Specifically MARLISCO aspires to deliver: i) a scoping study of the sources and trends regarding marine litter in each Regional Sea ii) a collection of best practices for dealing with marine litter from all partner countries iii) an international survey to evaluate the perceptions and attitudes of stakeholders regarding marine litter iv) a series of national debates in many countries, involving industry sectors, scientists and the wider public v) a European video contest for school students vi) educational activities and tools targeting youth and vii) many tailor-made national activities such as exhibitions, workshops, festivals and clean-ups. MARLISCO's total budget is € 4.119.357.

MEDESS/ co-financed by the European Union and National Resources of participant countries

Mediterranean Decision Support System for Marine Safety (MEDESS-4MS) is dedicated to the strengthening of maritime safety by mitigating the risks and impacts associated to oil spills. **MEDESS-4MS** capitalizes on existing pan-European frameworks and embraces recent advances and important developments in oceanography in the Mediterranean area. **MEDESS-4MS** aims to deliver an integrated operational multi model oil spill system in the Mediterranean by gathering and analyzing met-ocean data as well as data related to ship traffic, ship operations and sensitivity mapping. This data will be provided to well-established oil spill monitoring and forecasting systems, thus, providing an invaluable tool regarding the early detection and efficient control of the oil spill at early stages. Therefore, **MEDESS-4MS** aims to offer a comprehensive and integrated multi-model approach regarding our response to oil spills at sea; an approach that takes into account all three important aspects related to marine pollution, that is, Prevention, Detection and Control. The beneficiary countries of **MEDESS-4MS** are Cyprus, France, Greece, Italy, Malta, Montenegro and Spain.

MED-JELLYRISK 2012-2015(Enhancing Management Approach and Mitigation Measures against Jellyfish Proliferations Impacts)/ Funded by the European Union

MED-JELLYRISK assesses the impact of jellyfish proliferation on the ecosystem and on the economy. The project promotes monitoring and implementation of countermeasures, by applying a cross-border approach in 10 selected Mediterranean coastal zones. The project operates under a budget of € 2.593.194 and focuses its efforts more on meeting EO 2.

MEDINA 2011-2014 (Marine Ecosystem Dynamics and Indicators for North Africa) / Funded by the European Union

MEDINA works towards enhancing Northern African Countries' (Morocco, Algeria, Tunisia, The State of Libya, and Egypt) capacity to monitor their coastal and marine ecosystems, and in turn implement environmental policies, conventions and protocols. The implementation of the MSFD and Integrated Coastal Zone Management (ICZM) guide MEDINA's work. E-infrastructure, compliant with Global Earth Observation System of Systems (GEOSS) on drivers, state and pressure indicators and impacts is available through MEDINA. The project, which operates under a budget of € 4.86.532, seeks to develop robust integrative methodologies to assess the status of the environment and implement the EcAp, particularly focusing on EOs 1, 2, 6, 7 and 8. To advance its work, MEDINA intends to explore the potential for cooperation, particularly with PERSEUS and MERMAID on strengthening capacities of non-European countries.

MEDISEH 2011-2013 (Mediterranean Sensitive Habitats) /Funded by the European Union

MEDISEH focuses on Mediterranean Sensitive Habitats and particularly on gathering and disseminating, through a Geographic Information System (GIS), dispersed information useful to integrate the environmental dimension into fisheries management. More specifically the project seeks to compile information on historical and current data on the locations and the status of seagrass beds, coralligenous and mäerl beds all over the Mediterranean basin and to identify and map suitable areas for *Posidonia*, coralligenous and mäerl communities by developing habitat distribution models at different spatial scales. Moreover information is compiled on existing MPAs and Fishing Restricted Areas (FRAs) in the Mediterranean, particularly in relation to the location of nursery and spawning aggregations of several small pelagic and demersal fish species. MEDISEH is mostly linked to EOs 1 and 3 and is working with a budget of € 568.341.

MedPartnership 2009-2015 (The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem)/ Funded by the Global Environment Facility and co-financed by participating countries and the EU

The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership) is a collective effort of leading environmental institutions and organizations together with countries sharing the Mediterranean Sea to address the main environmental challenges that Mediterranean marine and coastal ecosystems face. The MedPartnership catalyses action to create an enabling environment for the necessary policy, legal and institutional reforms in the partner countries, as well as investments, to improve environmental conditions of pollution and biodiversity hotspots and other priority areas under stress; promote the sustainable use of marine and coastal resources through integrated approaches; reduce pollution from land-based sources; enhance the protection of 'critical' habitats and species; integrate climate considerations into national marine and coastal planning. The MedPartnership is led by UNEP/MAP and is financially supported by the Global Environment Facility (GEF) and other donors, including the European Commission and all participating countries. Partner countries: Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Lebanon, The State of Libya, Morocco, Montenegro, Palestine, Syria, Tunisia and Turkey.

MED EUWI/ Funded by the European Union

MED EUWI is a regional component of the European Union Water Initiative (EUWI). The Mediterranean Component of the EU Water Initiative (MED EUWI) aims to assist developing countries to meet the water related Millennium Development Goals and Johannesburg Targets. Launched in 2003, it constitutes as integral part and one of the four geographic components of the overall EUWI.

MedSeA 2011-2014 (Mediterranean Sea Acidification in a changing climate) / Funded by the European Union

MedSeA assesses uncertainties, risks and thresholds related to Mediterranean acidification and temperature rise at organismal, ecosystem and socio-economical scales. 'Ocean acidification' is caused primarily by the ocean uptake of atmospheric human-generated carbon dioxide (CO₂). A main aim of the project is to forecast chemical, ecological, biological, and socio-economic changes of the Mediterranean driven by increases in CO₂, while focusing on the combined impacts of acidification and warming on marine organisms, ecosystems and biogeochemical processes. MedSeA is linked to the EcAp through EOs 1, 4 and 8 and has a budget of € 6.000.000 (excluding ship time). In addition, it is aiming to develop a Mediterranean long-term monitoring platform for acidification and warming. Acquired scientific knowledge is transferred to a wider audience of reference users [Ocean Acidification - Mediterranean Reference User Group (OA-MRUG)], while suggesting policy measures for adaptation and mitigation that are responsive to the needs of the different sub-regions in the Mediterranean. Furthermore MedSeA is expanding its information outlet on Mediterranean Sea climate and environmental change into a new on-line platform containing news and output from different EU Mediterranean coordinated projects.

MERMAID 2013-2015 (Marine environmental targets linked to regional management schemes based on indicators developed for the Mediterranean) / Funded by the European Union

MERMAID is developing a state-of-the-art methodology that will deepen knowledge on indicators and pressures for which limited data exist in the Mediterranean, set targets and link these with management measures to achieve GES in the Mediterranean. This methodology will be applied in three study areas of the Mediterranean. MERMAID is covering those EOs related to healthy fish stocks, hydrography, coastal ecosystems, contaminants and marine litter. The project's overall objective is to reinforce international cooperation particularly through transferring methodologies and assessment procedures to a non-EU country. In this regard, the potential for collaboration with PERSEUS and MEDINA has been identified. MERMAID's total budget is € 1.132.500.

MISIS 2012-2014 (MSFD Guiding Improvements in the Black Sea in Monitoring System) / Funded by the European Union

MISIS supports efforts to protect and restore the environmental quality and sustainability of the Black Sea, through: i) integrated monitoring and assessment, especially focusing on biodiversity and habitats and in line with the MSFD and the Water Framework Directive (WFD) ii) increase in the number and robustness of protected areas iii) greater stakeholder participation and public awareness on environmental issues iv) better implementation of the Bucharest Convention. In this regard, MISIS supports the use of already existing structures and platforms for databases, the organization of common trainings, workshops, stakeholder meetings, cruises and public awareness activities. The total budget of the project is € 872.066.

MYOCEAN II 2012-2014/ Funded by the European Union

MYOCEAN II operates and delivers a rigorous, robust and sustainable Ocean Monitoring and Forecasting system (in the context of the Global Monitoring for Environment and Security Marine Service) to users involved in maritime safety, marine resources, marine and coastal environment and climate, seasonal and weather forecasting. MYOCEAN II uses ocean state variables as the common-denominator, necessary for those working in the environmental and civil security policy making, assessment and implementation field. The project, which has a budget of € 6.000.000 is expected to end in 2014 and pave the way for the Copernicus Marine Service for 2014-2020.

ODEMM 2010-2014 (Options for Delivering Ecosystem-Based Marine Management)/ Funded by the European Union

ODEMM aims to deliver on the objectives of the MSFD, to identify stakeholder opinions on the creation of governance structures directed towards the implementation of the ecosystem approach, and to elaborate different scenarios for changing governance structures and legislation to facilitate a gradual transition from the current fragmented management approach towards fully integrated ecosystem-based marine management. ODEMM has developed a toolkit on Threat and Pressure Evaluations, GES risk assessment, Management strategy evaluation, cost benefit analysis and ecosystem services approaches. In its final year ODEMM has investigated decision-making processes associated with choosing and implementing management measures to support a sustainable future for European Seas. ODEMM's case-studies focused on seafloor integrity and food web descriptors and its 4 regional seas stakeholders' roadshows on ecological risk, ecosystem services and governance complexity. The total budget of the project is € 8.271.981.

PEGASO 2010-2014 (People for ecosystem based governance in assessing sustainable development of ocean and coast)/Funded by the European Union

PEGASO aims at constructing an ICZM governance platform to bridge scientist and end user communities. The project seeks to refine and further develop efficient and easy-to-use tools for making sustainability assessments in the coastal zone, by focusing on indicators, accounting methods, models and scenarios. Furthermore PEGASO seeks to implement a Spatial Data Infrastructure (SDI) to organize and standardize spatial data and support information-sharing

through an interactive platform, in order to make this data available and disseminate all results to end users and interested parties. With a budget of € 7.000.000 PEGASO is exploring the possibility of collaborating with PERSEUS to conduct socio-economic analyses, and with MEDINA on aspects related to ICZM. Building on the above, PEGASO is contributing to the implementation of the EcAp and specifically of the EOs 1, 6 and 8.

PERSEUS 2012-2015 (Policy-oriented marine Environmental Research for the Southern European Seas)/ Funded by the European Union

PERSEUS's work involves designing an effective and innovative research governance framework to assess, in line with the MSFD, the dual, long-term impact of human activities and natural pressures on the Mediterranean and Black Seas, with an emphasis on non-European areas. The result of this assessment will inform policymakers' efforts to introduce an ecosystem-based approach to management and meet the 2020 Clean Seas objective. PERSEUS is directly linked to the EcAp, since it builds on existing or develops new monitoring and modelling capabilities, while applying a results-based approach using specific quantitative/qualitative MSFD descriptors to identify the most efficient strategy of achieving GES. PERSEUS's budget is € 17.000.000.

POSOW/Funded by the European Union

The project for Preparedness for Oil-polluted Shoreline cleanup and Oiled Wildlife interventions – POSOW, coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), is a two year project co-funded by the European Commission under the Civil Protection Financial Instrument, to improve the preparedness and response in marine pollution in the Mediterranean region. The project POSOW aims at establishing a regional cooperation synergy through the enhancement of knowledge and capacities of operators (professionals and volunteers) in the field of marine pollution, in European coastal countries of the Mediterranean Sea namely Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain. It is implemented by REMPEC and its partners, namely the Centre of Documentation, Research and Experimentation on Accidental Water Pollution (CEDRE), the Institute for Environmental Protection and Research (ISPRA), Sea Alarm Foundation, and the Conference of Peripheral Maritime Regions of Europe (CPMR). By providing training courses and material to civil protection professionals and volunteers, in cooperation with local competent authorities with the support of CPMR, the project aims at improving the effectiveness of emergency response to shoreline pollution following an oil spill in the Mediterranean Sea.

SafeMed Project (2006-2008, 2009-2012, 2013-2016) (Euromed Co-operation on Maritime Safety and Prevention of Pollution from Ships)

The SafeMed Project is a response to the interest of the European Union (EU) to develop Euro-Mediterranean co-operation in the field of maritime safety and security, prevention of pollution from ships and marine environmental issues by providing technical advice and support to the non-EU Mediterranean countries identified in the 1995 Barcelona Process.

The objective is to get a balanced approach in the application of maritime legislation in the region between the EU Member States and the Mediterranean partner countries through promoting a coherent, effective and uniform implementation of the relevant international conventions and rules aimed at better protecting the marine environment in the Mediterranean region by preventing pollution from ships.

With the intention to tackle the problem, a first SafeMed project (SafeMed I) ran from 2006 until 2008 and a second one (SafeMed II) from 2009 to 2012, both developed in co-operation with the Euro-Mediterranean Transport Forum (EUROMED) and implemented by REMPEC.

In view of the achievements of the two previous SafeMed projects, the European Commission and the Mediterranean partner countries agreed to launch a third SafeMed project (SafeMed III), which runs

from June 2013 to June 2016 for an overall duration of 36 months. The Project is implemented by the European Maritime Safety Agency (EMSA) established by the Regulation EC 1406/2002.

The SafeMed III Project assists the Beneficiary countries (Algeria, Egypt, Israel, Jordan, Lebanon, The State of Libya, Morocco, Palestinian Authority, Syria and Tunisia) with the further implementation of the 2007 adopted Regional Transport Action Plan (RTAP) for the Mediterranean 2007-2013 by building upon the achievements of SafeMed I and SafeMed II projects.

The overall objective of SafeMed III is to improve the protection of the Mediterranean sea marine environment against the risk of accidents at sea and marine pollution, by supporting the further ratification and implementation of international maritime safety and security conventions and improving the relevant capacities of maritime administrations in the Mediterranean partner countries. SafeMed III will focus on the approximation of the national legislation of the Beneficiary countries to the relevant EU legislation and, although being a regional project, the programme will focus also on specific needs at national level of each beneficiary country.

SeaDataNet 2012-2015 (Pan-European Infrastructure for Ocean & Marine Data Management)/ Funded by the European Union

SeaDataNet Infrastructure is a pan-European infrastructure for managing marine and ocean data by connecting National Oceanographic Data Centres (NODCs) from 35 countries bordering European seas. SeaDataNet is capable of contributing to the creation of a coherent EU data policy. At the core of the second phase of SeaDataNet lies the need to upgrade the present infrastructure into an operationally robust and state-of-the-art system that provides up-to-date and high quality access to ocean and marine metadata, data and data products. The SeaDataNet standards and tools have been adopted by several EU Projects such as, Geo-Seas, Eurofleets, Jerico, and Upgrade Black Sea Network. MyOcean and SeaDataNet projects cooperate through a memorandum of understanding and the production of common product. SeaDataNet is providing a major contribution to the development process for the overarching EMODNet (European Marine Observation and Data Network) that is included in the MSFD.

STAGES 2012-2014 (Science and Technology Advancing Governance on Good Environmental Status)/Funded by the European Union

STAGES aims to bridge the science-policy gap by improving the scientific knowledge base, identifying gaps and needs for further research and developing recommendations to establish an effective science-policy platform to support GES research and implementation of the MSFD. STAGES are carrying out a comprehensive knowledge collection in order to build an inventory of MSFD-relevant research projects and their associated knowledge outputs. Through comprehensive scientific foresight targeted at MSFD knowledge gaps, STAGES is making recommendations as to where future research needs to focus, so as to address identified knowledge deficits. STAGES will develop innovative solutions to achieve effective collaboration between MSFD stakeholders. This includes developing a tailor-made proposal for an MSFD science-policy interface, which can channel the best scientific advice to the appropriate end-users, thereby underpinning implementation of the Directive in the long term. The budget of the project is € 999.733.

SWITCH-Med/ Funded by the European Union

The EU funded SWITCH-Med programme aims at facilitating the shift toward Sustainable Consumption and Production - SCP - in the Southern Mediterranean Region. The programme is about changing the way goods and services are produced and consumed, so that human development and satisfaction of human needs is decoupled from environmental degradation. It will support industry, emerging green entrepreneurs, civil society and policy makers through policy development, demonstration activities and networking. In particular, the programme will support the development of a Mediterranean SCP Action Plan as requested by the Contracting Parties of the Barcelona Convention during the COP18 in Istanbul (December 2013).

SWIM (Sustainable Water Integrated Management) / Funded by the European Union

The SWIM regional programme has been launched by EC under the European Neighbourhood and Partnership Instrument (ENPI). The overall objective of SWIM is to actively promote the extensive dissemination of sustainable water management policies and practices in the context of increasing water scarcity, combined pressure on water resources from a wide range of users, and desertification processes, in connection with climate change.

SWMDM (Sustainable Water Management and De-pollution of the Mediterranean)/ Funded by the European Union

The SWMDM programme contributes to raising awareness of water value and of the continuous depletion of water resources. It also contributes to institutional reinforcement and the development of planning and management skills, in line with the objectives of the Horizon 2020 initiative for the de-pollution of the Mediterranean Sea. It supports activities aligned with the four priorities of the Mediterranean Water Strategy (MWS), namely water governance, water and climate change, water financing and water demand management. A few demonstration projects promote integrated ecosystems approaches in the fields of integrated water management, coastal zone management, and in sectors covered by the Horizon 2020 initiative.

ULIXES 2011-2014 (Unravelling and Exploiting Mediterranean Sea Microbial Diversity and Ecology for xenobiotics' and pollutants' cleanup)**Funded by the European Union**

ULIXES unravels, categorizes and catalogues marine microbial diversity in marine polluted sites with a view to developing bio-remediation methodologies all over Mediterranean Sea and Aqaba Gulf. Ulixes has a budget of € 3.000.00 and its work falls within the remit of EOs 1 and 9.

VECTORS 2011 – 2015 (VECTORS of Change in European Marine Ecosystems and their Environmental and Socio-Economic Impacts) Funded by the European Union

VECTORS is an integrated, multi-disciplinary project investigating the increasing and diversifying human use of the European marine environment (e.g. transportation, overfishing, climate change) and how this is leading to new and challenging changes for marine life and society. VECTORS is examining how these changes affect the range of ecosystem services provided by the oceans, the ensuing socio-economic impacts and some of the measures that could be developed to reduce or adapt to these changes. In the Mediterranean, VECTORS is particularly focused on the study of biological invasions and outbreaks including the development of large databases for alien invasive species and their vectors of introduction and the creation of a DNA/tissue data bank for populations' genetics. VECTORS is a € 16.600.000 European project supported within the Ocean of Tomorrow call of the EC FP7 Programme and covers a wide range of EOs, namely 1, 2, 3, 4, 5, 9, and 11. The understanding developed through VECTORS will contribute the information and knowledge required to inform the development and implementation of forthcoming strategies, policies of regional seas conventions, management bodies and regulations of the IOM Convention on Water Ballast Management, the MSFD and EU's Maritime Policy.

WGPAS (Water Governance Programme for Arab States) / Funded by the European Union

WGPAS aims to support regional efforts in improving the effective management and use of scarce water resources in Arab States by addressing socio-economic and environmental dimensions of water governance.